ALTAISKIY
BIOSPHERE RESERVE
EST.1932

United Nations
Educational, Scientific and
Cultural Organization

Man and
the Biosphere
Programme

Altaisky State Nature Biosphere Reserve (Russian Federation) Periodic review

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PART I: SUMMARY

a) Name of the biosphere reserve:

Altaisky State Nature Biosphere Reserve

b) Country:

Russian Federation

c) Year of designation:

2009

d) Year(s) of periodic review(s):

-

e) Previous recommendation(s) made by the International Co-ordinating Council (MAB- ICC), if applicable:

-

f) What follow-up actions are completed and if not completed/initiated, please provide justifications.

-

g) Update on the implementation of measures to achieve the objectives of the biosphere reserve.

-

h) Briefly describe the process by which the current periodic review has been conducted:

During the preparation of the current periodic review, inter alia to fulfill the functions of the biosphere reserve, the following activities were carried out:

- questioning of the population living in the core area;
- conducting press tours on the territory of the biosphere reserve for representatives of regional and federal media;
- conducting information tours for colleagues from other SPNA (specially protected natural areas), to demonstrate the experience of interaction between the biosphere reserve and the local population;
- meetings with local people and representatives of TPS

- holding meetings of the Non-profit Partnership "Council for the Ecological and Socio-Economic Development of the Teletskaya Natural Territory (Lake Teletskoye Council)"
- working out of a strategy for the development of ecological (educational tourism) in the Altaisky Biosphere Reserve;

The obtained data formed the basis of this report.

i) Area and spatial configuration:

	Previous report (nomination form or periodic review) and date	Proposed changes (if any)
Area of terrestrial Core Area(s)	**881236 ha**	**881236 ha**
Area of terrestrial Buffer Zone(s)	**962800** ha	**962800** ha
Area of terrestrial Transition Area(s)	**1688198** ha	**1688198** ha
Area of marine Core Area(s)	-	-
Area of marine Buffer Zone(s)	-	-
Size of marine Transition Area(s)	-	-

j) Human population of the biosphere reserve:

	Previous report (nomination form or periodic review) and date	At present (please state date of census or other source)
Core Area(s) (permanent and seasonally)	265/20000	*233*/60000*
Buffer Zone(s) (permanent and seasonally)	640/25000	*3303*/100000*
Transition Area(s) (permanent and seasonally)	3262/120000	20380*/270000

* population census results for 2016

k) Budget (main sources of funds, special capital funds) and international, regional or national relevant projects/initiatives carried out or planned.

Altaisky State Nature Biosphere Reserve is a federal institution funded from the federal budget

The budget table

№	**Source of financing**	**Sum of money per year in thousand rubles/(%) (at the time of application)**	**Amount of money per year in thousand rubles/(%)**

			(current moment)
1	**Federal budget**	11871,4 (89 %)	46923,6 (91,6%)
2	**Regional and local sources**	0,0 (0 %)	45,00 (0,1%)
3	**Extra budgtary sources**	1511,5 (11 %)	4272,15 (8,3%)
4	**TOTAL**	13382,9 (100%)	51240,75 (100%)

l) International, regional, multilateral or bilateral framework of cooperation. Describe, where applicable, the contribution of the biosphere reserve to achieve objectives and developing mechanisms that contribute to the implementation of international or regional bilateral or multilateral agreements, conventions, etc.

Altaisky Nature Reserve is a member of the Association of Nature Reserves and National Parks of the Altai-Sayan Ecoregion, is one of the founders of the Non-profit Partnership "Council for the Ecological and Socio-Economic Development of the Teletskaya Natural Territory (Lake Teletskoye Council)". From 2009 to 2016, the Altai Reserve was a co-founder of the Altai-Sayan Mountain Partnership.

In order to promote environmental education of the population, we cooperate with various organizations, such as: WWF-Russia, EcoCenter «Zapovedniki», Republican Center for Supplementary Education, and the social movement "Start with Your Home".

To consrvate and promote the culture and traditions of indigenous and small peoples, the Altaisky Nature Reserve cooperates with the Regional Public Environmental Organization «Sacral Altai», the Regional Public Organization «Tuba Kalyk» (the Tubalar people), the community of indigenous small peoples (ISP) «Biy» of the village Biyka, the Telengits community «Kun», the Tubalar family-tribal community of indigenous peoples «Alchi», the throat singing band "Altai-Kai», the Gorno-Altaisk diocese of the Russian Orthodox Church (Moscow Patriarchate), inter alia the administrations of Turochak and Ulagan districts.

Scientific research in the Altaisky Biosphere Reserve is carried out in close collaboration with the Institute for Water and Environmental Problems of the Siberian Branch of the Russian Academy of Sciences, Central Siberian Botanical Garden of the Siberian Branch of the Russian Academy of Sciences, the Gorno-Altaisk Center for Hydrometeorology and Environmental Monitoring, Gorno-Altaisk State University (Gorno-Altaisk), Altai State University (Barnaul) and others.

Altaisky Biosphere Reserve constantly cooperates with educational institutions in the region, regular interaction is carried out with the National Museum and the National Library, inter alia, exhibitions, thematic events, lectures, meetings are held.

Active work is underway on environmental education of schoolchildren and students through interaction with the regional Ministry of Education and Science of Altai Republic, Gorno-Altaisk State University, EcoCenter «Zapovedniks», Republican Center for Supplementary Education, Children's Center "Happy Childhood" (village Artybash).

Altaisky Reserve cooperates with third-party research organizations that conduct scientific work in the reserve. Reserve signed agreements on scientific collaboration with 24 research organizations, including foreign ones.

The reserve interacts most closely with the Institute for Water and Environmental Problems of the Siberian Branch of the Russian Academy of Sciences (Barnaul), the Central Siberian

Botanical Garden of the Siberian Branch of the Russian Academy of Sciences (Novosibirsk), Gorno-Altaisk State University (Gorno-Altaisk).

Every year, during the summer field season, at least five scientific expeditions work in the reserve. This allows us to expand the scope of scientific knowledge of the reserve and provides valuable information, in addition to the information received by the employees of the reserve's scientific department.

For the conservation of rare animal populations, the reserve interacts with the Mongolian national park Silkhem and the Russian biosphere reserves Ubsunurskaya Kotlovina (Ubsunur Basin Biosphere Reserve) and «Khakassky». Since 2014, the Altaisky Biosphere Reserve has been a member of the International Alliance of Protected Areas (IAPA).

PART II: PERIODIC REVIEW REPORT

1. BIOSPHERE RESERVE:

1.1 **Year designated:**

2009

1.2 **Year of first periodic review and of any following periodic review(s) (when appropriate):**

-

1.3 **Follow-up actions taken in response to each recommendation from the previous periodic review(s) (if applicable), and if not completed/initiated, please provide justifications.**

-

1.4 **Other observations or comments on the above.**

-

1.5 **Describe in detail the process by which the current periodic review has been conducted:**

1.5.1 **Which stakeholders were involved?**

The following parties were involved in collecting and analyzing information about the current state of the biosphere reserve for assessing the expectations and concerns of the local population, inter alia scientific and state institutions:

- the reserve staff;
- Employees of the Ministry of Natural Resources and Ecology of the Russian Federation;
- Experts and staff of the representative office of the World Wide Fund for Nature in the Altai-Sayan Ecoregion;
- Scientific organizations of the federal and regional levels (Gorno-Altaisk State University, Institute for Water and Environmental Problems of the Siberian Branch of the Russian Academy of Sciences, Central Botanical Garden of the Siberian Branch of the Russian Academy of Sciences, etc.) ;
- Administrations of Turochaksky and Ulagansky districts and Artybash rural settlement ;
- Government organizations located on the territory of the core area of the biosphere reserve and on the territory of the cooperation: Yailu secondary school, Artybash secondary school, the club of "Friends of the Altaisky reserve" ;
- Municipal, regional and federal media;
- Public organizations: Territorial public self-government “Village of Yailu”, “Lake Teletskoye Council”;

- Communities of the Tubalar indigenous small people: "Alchi", "Biy." ;
- Individual members of indigenous peoples, community leaders;

1.5.2 **What methodology was used to involve stakeholders in the process (e.g., workshops, meetings, consultation with experts).**

To gather information about the current state of the biosphere reserve, and involve the stakeholders the following methods were used:

- gatherings of rural residents;
- Meetings of the members of the Territorial Public Self-Government (TPS) "The Reserved Village";
- meetings with individual experts and researchers;
- population surveys;
- interviews and discussions;
- analysis of information published in the media;
- analysis of opinion polls;
- analysis of periodic (annual) reports of the Altaisky State Reserve.

1.5.3 **How many meetings, workshops, etc. occurred throughout the process of conducting this review?**

To prepare this report, we analyzed information on more than 50 meetings, interviews, surveys, etc. for the period from 2010 to November 2019.

1.5.4 **Were they well attended, with full and balanced representation?**
(Describe participation and stakeholders).
We believe that meetings, discussions, interviews, and other methods used to gather information on stakeholder attitudes were properly planned and organized, and the results are representative and comprehensive

On the basis of this information, a large analysis of the interests, expectations, claims and issues associated with the activities of the reserve was carried out. The results of the analysis formed the frame of this report

The following methods were used:

Questioning and surveys of interested parties, local people, tourists, representatives of travel agencies;

Seminars with employees of the reserve, state institutions and other official organizations, inter alia meetings with representatives of tribal communities;

Consultation meetings of scientific working groups on various topics;

Interviews and discussions with individual representatives of interested parties, including with local residents;

Analysis of the information published on the Internet and the media (analysis of articles, comments on social networks, etc.);

Analysis of specific public-opinion polls, including a survey on the development of ecotourism in the Altaisky Reserve.

2. SIGNIFICANT CHANGES IN THE BIOSPHERE RESERVE DURING THE PAST TEN YEARS:

2.1 **Brief summary overview: Narrative account of important changes in the local economy, landscapes or habitat use, and other related issues. Note important changes in the institutional arrangements for governance of the biosphere reserve area, and changes (if any) in the coordinating arrangements (including the biosphere reserve organization/coordinator/manager) that provide direction for the biosphere reserve. Identify the role of biosphere reserve organization/coordinator/manager in initiating or responding to these changes.**

Altaisky Nature Reserve is one of the very first nature reserves in Russia (established in 1932), this served as a reliable basis and a guarantee of conservation of its biodiversity and natural ecosystems. Altaisky Nature Reserve is one of the few corners of the planet where human activity has not led to irreversible changes in natural ecosystems. That is why the Altai-Sayan Mountain Country, is included in the list of "Global-200" (identified by the World Wildlife Fund) - a list of virgin or slightly modified ecoregions of the world, in which 90% of the world's biodiversity is concentrated.

The territory of the Altaisky Reserve includes five physiogeographic areas of three natural provinces. Almost all natural zones of the Altai Mountains stand out in the spectrum of altitudinal zonation. Forests occupy 34% of the total area of the main zone. The variety of natural and climatic zones of the Altaisky Reserve determined the exceptionally rich species composition of the flora and fauna on its territory. By the number of vascular plants species, the Altaisky Reserve shares the first place among the protected areas of Russia along with the Caucasian Biosphere Reserve. According to the diversity of species that live on the territory, it is one of the five Russian reserves. Altaisky Nature Reserve includes 4 important bird areas (IBA), which are of international importance within the framework of the Important Bird Areas programme, developed by the international bird conservation association (BirdLife International).

The reserve has a dense hydrographic network. The bulk of the rivers belong to the basins of the Lake Teletskoye and the Chulyshman River, the main river of Eastern Altai. Rivers are characterized by main streams and waterfalls. The most famous of them are Korbu waterfall (13 meters high) and Uchar waterfall on the Chulcha river - a 160-meter cascade of waterfalls. Altaisky Nature Reserve is the largest lake country in the territory with 2560 medium and small lakes, the largest of which is Teletskoye Lake. Most of the waters of Lake Teletskoye (11757 ha) are included in the core area of the Altaiskyi Reserve. Lake Teletskoye is located in a huge basin of the northeastern part of the mountainous country of Altai at the junction with the Western Sayans. The largest lake in Altai is located at an altitude of 436 meters above sea level, it is surrounded by high mountain ranges with the height from one and a half to two thousand meters. Lake Teletskoye is the largest mountain reservoir in Russia, the second in Siberia by size (after Baikal), a storage of fresh, clean water of the highest quality. 16 species of fish live in the lake, including localazed endemic species (Coregonus lavaretus natio smitti and Coregonus lavaretus

Pravdinellus). Many other animal groups are also associated with the lake, including 15 species of birds and 9 species of mammals included in the Red Book of the Altai Republic.

Altaisky Biosphere Reserve is located in the territories of two municipalities: Turochaksky and Ulagansky districts. This territory is characterized by positive dynamics of tourism development over the past 10 years. A significant part of the local population, especially in settlements located in direct proximity to the core zone, is engaged in tourism. Earlier, tourism here was of a strongly pronounced seasonal nature, but in 2014 a ski complex was opened, which opened up the prospects for all-weather tourism. There is a timber processing industry in the area. Indigenous peoples are engaged in traditional types of nature management: gathering wild herbs, hunting and fishing. The sale of wild herbs is also a source of additional revenue for local people.

Altaisky Reserve is subordinate to the Ministry of Natural Resources and Ecology of the Russian Federation. In recent years, state funding of the reserve has increased. Extrabudgetary sources - revenues from the ecological and tourist activities of the reserve and grant funds (WWF-Russia, European Union, Citi Foundation). The security service registers a decrease in the level of poaching in the reserve core, which is an indirect indicator of the success of the projects implemented by the biosphere reserve management in the field of microloans and grants for local residents aiming to organize their own business.

Representatives of local communities, indigenous people, businesses and authorities are actively involved in the Altaiskyi Biosphere Reserve management process. Non-profit organizations directly involved in the co-management of the Altaiskyi Biosphere Reserve - “Lake Teletskoye Council”, TPS “The Reserved village”. At least 2 meetings are held annually with the participation of these organizations, issues relating to the functioning and strategic planning of the Altaisky Biosphere Reserve are discussed.

In 2016, the position of Deputy Director for Development of the Biosphere Territory was introduced in the Altaisky Biosphere Reserve. The main objective of which is to implement communication with all stakeholders for the development of the biosphere reserve, fundraising, programmes and projects aimed at development of a "green economy", sustainable development, conservation of the natural and cultural heritage.

2.2 **Updated background information about the biosphere reserve.**

2.2.1 **Updated coordinates (if applicable). If any changes in the biosphere reserve’s standard geographical coordinates, please provide them here (all projected under WGS 84):**

	Center	**North**	**East**	**South**	**West**
Latitude	51º59'	51º57'05,8´´	50º28´42,1´´	50º 16'14,2´´	51º43'11,2´´
Longitude	88º42'	87º58'13,8´´	89º51´47,3´´	89º 21'21,6´´	86 º59'55,7´´

2.2.2 **If necessary, provide an updated map on a topographic layer of the precise location and delimitation of the three zones of the biosphere reserve Map(s) shall be provided in both paper and electronic copies. Shape files (also in WGS 84 projection system) used to produce the map must also be attached to the electronic copy of the form.**

If applicable, also provide a link to access this map on the internet (e.g. Google map, website).

Not applicable.

2.2.3 **Changes in the human population of the biosphere reserve.**

Most recent census data:

	Previous report (nomination form or periodic review) and date	**At present (please state date of census or other source)**
Core Area(s) (permanent and seasonally)	265/20000	233*/60000
Buffer Zone(s) (permanent and seasonally)	640/25000	3303*/100000
Transition Area(s) (permanent and seasonally)	3262/120000	20380*/270000

* Population census for 2016

2.2.4 **Update on conservation function, including main changes since last report.**
(Note briefly here and refer to 4 below).

Territory security, state supervision and control in the field of conservation and use of the reserve's territory are carried out by state inspectors in the field of environmental protection. The activities of the security service (ranger service) are the most important on the territory of the core area of the BR. The main tasks are the fight against poaching and other violations of environmental laws, the suppression of forest and wildland fires. The core area of the Altaisky Reserve is divided into 4 sections: Yailinsky, Belinsky, Chodrinsky and Yazulinsky. In all areas there are 10 cordons. Communication with cordons and the sections is carried out by radio, mobile communications (at 6 cordons) and satellite communications (in case of emergency). The cordons of the biosphere reserve are equipped with vehicles and fire fighting equipment. Territory protection is carried out by 36 state inspectors (2019), they are provided with uniforms and weapons. Including two operational groups as permanent structural units. Employees of the operational groups are provided with viewing devices, photo and video-fixation devices, GPS / GLONASS navigation devices and modern equipment.

2.2.5 **Update on the development function, including main changes since last report.**
(Note briefly here and refer to 5 below).

One of the important goals of the Altaisky Biosphere Reserve is to ensure sustainable livelihoods of the local population subject to environmental requirements. The reserve seeks to improve the living standards of the local population and derive a benefit from the development of the Altaisky Reserve. In this area, the reserve helps to distract the local population from poaching by organizing alternative forms of employment. Only the locals work at the popular site of the reserve - Korbu Waterfall. During the season the site is visited by 40-60 thousand people. Locals provide catering services, sell souvenirs, photographs. In total, 20 work positions were provided at the reserve by 2019.

The reserve is developing tools to involve the local population in the development of small businesses in the field of tourism. For this purpose, the Altaisky Biosphere Reserve implemented:

a competitive microcredit program for the population 2012-2016 (together with the Altai-Sayan Mountain Partnership, Citi Foundation and WWF Russia), a grant program for small business support 2016 - 2018 (along with the Ecological Center "Zapovedniks" and the European Union). A separate project aims to support the rights of local communities and indigenous peoples of Altai, their cultural and natural heritage. Local and indigenous peoples of Altai are the main defenders of nature and biodiversity of Altai Mountains. The Altaisky Biosphere Reserve maintains and works closely with the world-famous throat singing band "AltaiKai" as the "main voice" to appeal for the conservation of native nature among the local population. The band was founded by the native inhabitants - telengits, natives of the Ulagansky district of the Altai Republic, where a large part of the Altaisky Reserve is located. Altaisky Biosphere Reserve provides financial, organizational and informational support to arrange band concerts and album releases.

2.2.6 **Update on logistic support function, including main changes since last report.**
(Note briefly here and refer to 6 below).

The main target groups in the framework of environmental education and awareness are:

- children and youth groups and youth associations;
- local adult population;
- tourists and vacationers.

The main areas of environmental education of the Altaisky State Natural Biosphere Reserve: interaction with the media. Advertising and publishing activities. Creation of audio, film and video products. Museum studies and organization of information centers for visitors. Ecological excursions. Work with schoolchildren. Work with target groups of the adult population (tourists, hunters, fishers, private entrepreneurs). Interaction with teachers of educational institutions and educational authorities. Ecological holidays and promotions. Creation and informational and technical support of the website. Development of the volunteer institution. Organization and conduction of methodological seminars. A part in the environmental education. Altaisky Nature Reserve acts as a regional center promoting the dissemination of ideas of sustainable environmental management among different sectors of the population through cooperation and interaction with various government agencies and public organizations. The main events for active and comprehensive work with the population: working meetings, seminars, round tables discussions, conferences, holidays, events, exhibitions, excursions, presentations.

Employees of the scientific department of the reserve, inter alia third-party scientific organizations, monitor the state of natural complexes and their components in the reserve. In particular, common and rare species of fauna (Musk deer, Snow leopard and its food base - Siberian mountain goat, Argali) and avifauna are regularly censored, changes in plant communities, and the impact of recreational activities are monitored.

The reserve also has a station for integrated background monitoring of the environment. The main areas of scientific specialization of employees of the scientific department: biology, lichenology, herpetology, phenology, ornithology, hydrology, theriology, micromammology, zoology, entomology, climatology.

2.2.7 **Update on governance management and coordination, including changes since last report (if any) in hierarchy of administrative divisions, coordination structure.**
(Note briefly here and refer to 7 below).
Administratively, the reserve is subordinate to the Ministry of Natural Resources and Ecology of the Russian Federation.

2.3 **The authority/authorities in charge of coordinating/managing the biosphere reserve:**
(Comment on the following topics as much as is relevant).
Ministry of Natural Resources and Ecology of the Russian Federation (Department of State Policy and Regulation in the Field of Development of Protected Areas and the Baikal Natural Territory).

2.3.1 **Updates to cooperation/management policy/plan, including vision statement, goals and objectives, either current or for the next 5-10 years**

The governance of the biosphere reserve is based on the following documents:

Area of activity	Title of the document	Content	Targets and goals	Validity
Resource management	Work plan for state registration of the borders of the reserve (core zone) and real estate	Registration for state registration of the boundaries of the reserve and real estate located in the core zone	Creation of conditions for the main activity of the reserve and the implementation of its tasks	3 years
	Procurement, plan	The list of vehicles, computer equipment, stationery, etc.	Creation of conditions for the main activity of the reserve and the implementation of its tasks	3 years (for transport) 1 year (for the rest)
Security (territory protection)	Work plan of the security service (ranger service)	Security Organization	Security Organization	1 year, 1 quarter
Science	Environmental monitoring program	Organization of scientific research in the reserve (types, directions and frequency of activity)	Long-Term Research Planning	Permanently
	Plan of research and scientific and technical work	Organization of scientific research the current year for employees, invited experts, independent researchers	Work plan for the year	1 year
	Scientific department work plan	The work plan of the department staff (not only	Work organization of	1 year, 1 quarter

		scientific research, but also writing and publishing articles, participating in speeches, etc.)	the scientific department	
Environmental education	Environmental Education Work Plan	Work plan (exhibitions, classes with students, meetings with adults, etc.)	Organization of the work of the educational department	1 year, 1 quarter
Tourism	Ecotourism Development Strategy (project)	General strategy for the organization and development of tourism	Setting strategic goals and objectives	Permanently
	Programme for Ecotourism Development Strategy	Infrastructure development, staff training, strategic directions	Specification of facilities and activities, including infrastructure development and creation of conditions for the development of ecotourism	5 years
	Department work plan	Department staff work plan	Organization of the tourism department work	1 year, 1 quarter
Stakeholders	Stakeholder involement	Improving relationships with stakeholders	Messages about Activity	5 years
Area of activity	Title of the document	Content	Targets and goals	Validity

2.3.2 **Budget and staff support, including approximate average annual amounts (or range from year-to-year); main sources of funds (including financial partnerships established (private/public), innovative financial schemes); special capital funds (if applicable); number of full and/or part-time staff; in-kind contribution of staff; volunteer contributions of time or other support.**

Reserve is financed from the state budget. Dynamics of budget financing of the Altaisky Biosphere Reserve:

	2014	**2015**	**2016**	**2017**	**2018**	**2019**

Budget financing, thousand rubles	35 764,50	49 056,70	45 596,70	34 196,70	44 729,50	47 182,60
including labor remuneration, thousand rubles	17 939,80	19 475,90	20 049,90	18 066,60	23 702,50	24 245,00

In summer, the Altaisky Reserve attracts seasonal workers, but no more than 5 people.

Volunteers work in the Altaisky Reserve and take part in research expeditions.

2.3.3 **Communications strategy for the biosphere reserve including different approaches and tools geared towards the community and/or towards soliciting outside support.**

Information support for the Altaisky Biosphere Reserve is achieved by the following approaches:

- In 2017, a new logo of the Altaisky Biosphere Reserve was developed, the logo symbolizes the relationship of man and nature, as a reflection of the main idea of the biosphere;

- Since 2009, the Altaisky Reserve has had its own press center. Today, press releases are distributed to over 100 email addresses. News of the Altaisky Biosphere Reserve constantly appears in municipal, regional and federal media;

- Altaisky Biosphere Reserve created the website **www.altzapoved.ru** The section "Transition zone of the Altaisky Biosphere Reserve" has been developed on the website, where the activity of the reserve is widely covered **http://www.altzapovednik.ru/info/territorija.aspx** According to statistics from 2013 to 2019, 230 thousand people visited the site, and the total number of views was 900 thousand.

- The reserve's press center actively uses social networks to promote news about the activities of the biosphere reserve. Today, Altaisky Reserve communities have been created in all popular social networks and cover 11,611 subscribers.

- Altaisky Nature Reserve has its own newspaper "Rezerve Without Borders". A newspaper is published once a year, it publishes the most significant achievements and events of the year.

- Since 2010, the Altaisky Reserve supports the media club "Rezerve Without Borders The goal of creating the club is to unite the regional media to provide wide notification of the reserve activity. Together with journalists, the Altaisky Reserve annually develops a communication strategy and action plan.

2.3.4 **Strategies for fostering networks of cooperation in the biosphere reserve that serve as connections ("bridging") among diverse groups in different sectors of the community (e.g. groups devoted to agricultural issues, local economic development, tourism, conservation of ecosystems, research and monitoring).**

Representatives of local communities, indigenous people, businesses and authorities are actively involved in the Altaisky Biosphere Reserve management process.

The strategic objective is to co-manage the biosphere territory in the issues of socio-economic development of the cooperation zone, in the issues of nature conservation and the cultural and historical heritage. Co-management is carried out through the participation of the reserve in the non-profit organizations "Lake Teletskoye Council" and TPS "The Reserved Village", the meetings are held at least 2 times a year and where the problems of the territory and its further development are discussed.

Altaisky Biosphere Reserve is a member of the Association of Nature Reserves and National Parks of the Altai-Sayan Ecoregion. This is a professional association of environmental organizations operating in the territory of Altai and Sayan.

Individual employees of the Altaisky Biosphere Reserve provide representation of the reserve in various public associations and structures: Public Council on Nature Conservation and Nature Management under the Prosecutor's Office of the Altai Republic, the Commission for Juvenile Affairs and the Protection of their Rights of the Altai Republic, the Coordinating Council on the Development of Children's Tourism under the Government of the Altai Republic, the Commission on editing the Red Book of the Altai Republic. Representatives from the Altaisky Reserve regularly participate in meetings of the Association of Tour Operators of the Altai Republic.

2.3.5 **Particular vision and approaches adopted for addressing the socio-cultural context and role of the biosphere reserve (e.g. promotion of local heritage resources, history, cultural and cross-cultural learning opportunities; cooperation with local population; reaching out to recent immigrant groups, indigenous people etc.)**.

The Department of Environmental Education of the Altaisky Reserve actively works both on the reserve territory and in other places. The main events for active and comprehensive work with the population: working meetings, seminars, round tables discussions, conferences, holidays, events, exhibitions, excursions, presentations.

The main target groups in the framework of environmental education and awareness are:
- children and youth groups and youth associations;

- local adult population;

- representatives of indigenous peoples;

- tourists and vacationers.

Altaisky Reserve carries out the following activities aimed at promoting environmental knowledge and heritage:

- Interaction with the media ;

- Advertising and publishing activities;

- Creating audio, film and video products ;

- Museum studies and organization of information centers for visitors;

- Ecological excursions;

- Work with schoolchildren ;

- Work with target groups of the adult population (tourists, hunters, fishers, private entrepreneurs);

- Interaction with teachers of educational institutions and educational authorities;

- Ecological holidays and promotions ;

- Establishment and information and technical support on the web-site;

- Development of the Volunteer Institute;

- Organizing and conducting methodological seminars.

2.3.6 **Use of traditional and local knowledge in the management of the biosphere reserve.**

Since 2016, a permanent heading “Traditions of the Altaisky Reserve” has been functioning on the official website of the Altaisky Reserve

http://www.altzapovednik.ru/info/publikatcii/traditcii-zapovednogo-Altaya.aspx

Materials on the traditional calendar of the indigenous peoples of Altai, customs and traditions are presented here. The column is led by the employee of the Department of Environmental Education, a representative of the indigenous people «the Altaians”.

2.3.7 Community cultural development initiatives. Programmes and actions to promote community language, and, both tangible and intangible cultural heritage. Are spiritual and cultural values and customary practices promoted and transmitted?

Local and indigenous peoples of Altai are the main defenders of the indigenous nature and biodiversity of Altai Mountains. The Altaisky Biosphere Reserve maintains and works closely with the world-famous throat singing band «Altai Kai» as the “main voice” for stimulating and appealing against poaching among the local population. The band was founded by indigenous inhabitants - the telengits, natives of the Ulagan district of the Altai Republic, where a large part of the Altaisky Reserve is located.

2.3.8 **Specify the number of spoken and written languages (including ethnic, minority and endangered languages) in the biosphere reserve. Has there been a change in the number of spoken and written languages? Has there been a revitalization programme for endangered languages?**

The number of languages in the biosphere reserve has not changed. The main spoken and written languages: Russian, Altaian.

Communities of indigenous peoples live in the transition zone of the Altaisky Biosphere Reserve: Turochaksky district: the Tubalars (50%), the Chelkans (34%), the Telengits (1%), Kumandins (15%); Ulagansky district: Telengits (99%), the Kumandins, the Chelkans, the Tubalars and Teleuts (1%).

The languages of these peoples are dialects of the Altaian language related to endangered languages. They are officially recognized languages of the small peoples of Russia. In recent years, much attention has been paid to the state support of indigenous peoples in the region. The Advisory Council on Indigenous peoples issues of the Altai Republic under the Head of the Altai Republic actively works.

In 2019, the Russian-Tubalar phrasebook "How to say it in Tubalar" was published. One of the authors of the phrasebook is the Elder of the Tubalar clan Anastasia Todozhokova, with whom the Altaisky Biosphere Reserve has been cooperating since 2016.

2.3.9 **Management effectiveness. Obstacles encountered in the management/coordination of the biosphere reserve or challenges to its effective functioning.**

The main difficulty in the interaction of the biosphere reserve and stakeholders - ministries and departments is the periodic change of managers of a government agency the reserve interacts with. Sometimes, many years of well-established cooperation stops with the leaving of a key person and the work has to be started from the beginning. But despite this, the Altaisky Reserve manages to maintain effective interaction with all stakeholders.

2.4 **Comment on the following matters of special interest in regard to this biosphere reserve: (Refer to other sections below where appropriate).**

2.4.1 **Is the biosphere reserve addressed specifically in any local, regional or/and national development plan? If so, what plan(s)? Briefly describe such plans that have been completed or revised in the past 10 years.**

The national strategic documents “Strategy for the Development of Tourism in the Russian Federation for the Period until 2020” and “Strategy for the Development of Tourism in the Russian Federation for the Period until 2035” pay substantial attention to the development of cognitive (ecological) tourism in protected areas (including the Altaisky state reserve territory). The conceptual framework for the development of protected areas system of federal significance for the period until 2020 defines cognitive tourism in protected areas as a specialized type of ecological tourism, the main purpose of which is introduction to cultural sights that are closely related to nature.
Altaisky Biosphere Reserve is taken into account in the master plan for the development of the Artybash rural settlement https://minregion-ra.ru/wp-content/uploads/2013/08/gen_plan_artibash_pojasn.pdf

2.4.2 **Outcomes of management/cooperation plans of government agencies and other organizations in the biosphere reserve.**

Altaisky Biosphere Reserve has signed agreements on long-term cooperation:

- with the biosphere reserves of the Altai-Sayan Ecoregion, with which the Altaisky BR directly borders - the Khakassky BR and the Ubsunur Basin biosphere reserve. Cooperation is conducted in the field of conservation of wildlife from poachers, conducting joint scientific research;

- with the Ministry of the Internal Affairs for joint activities in the protection of the reserve core from poaching;

- with the Ministry of Culture of the Altai Republic, cooperation and interaction in the cultural and educational field and the scientific activities of the parties;

- with Gorno-Altaisk State University, mutual cooperation in the training of highly qualified staff in terms of students' internship and training for the enterprise;

- with the Gorno-Altaisk Center for Hydrometeorology and Environmental Monitoring in the field of joint research and environmental monitoring;

- multilateral agreement: State Natural Biosphere «Katunskiy», Saylyugemsky National Park, «Committee for the Protection, Use and Reproduction of Wildlife of the Altai Republic», NE "Altai-Sayan Mountain Partnership», Altai Republic RPO "Argali», in order to organize work on monitoring the distribution of the number of rare and endangered species of animals, including the Altai mountain sheep (Argali) and Snow leopard, inter alia other representatives of the flora and fauna of the region;
- with the Republican Gymnasium named after V. Plakas (UNESCO Associated School) and the Republican Classic Lyceum (UNESCO Associated School) for organizing and conducting conferences, seminars, round tables discussion, competitions and other scientific and educational events;
- with the National Library named after M. Chevalkov and the National Museum named after A. Anokhin, for organizing and conducting conferences, seminars, round tables discussions, competitions and other scientific and educational events;

- with the Gorno-Altaisk State Polytechnic College, interaction in the field of environmental education, science and tourism;

- with the Institute for Water and Environmental Problems of the Siberian Branch of the Russian Academy of Sciences on the sunject "Teletskoye Lake ecosystem and its catchment basin as an object of environmental monitoring".

2.4.3 **Continued involvement of local people in the work of the biosphere reserve. Which communities, groups, etc. How are they involved?**

Altaisky State Natural Biosphere Reserve cooperates with various groups of local residents. The Altaisky Biosphere Reserve is implementing the project "Preservation of the Heritage of Local and Indigenous Communities of Altai". This project aims to support the rights of local communities and indigenous peoples of Altai, and their cultural and natural heritage. Local and indigenous peoples of Altai are the main defenders of the indigenous nature and biodiversity of Altai Mountains. Altaisky Biosphere Reserve maintains and works closely with the world-famous throat singing band "Altai Kai» as the "main voice" for stimulating and appealing against poaching among the local population. The band was founded by indigenous inhabitants — the telengits, natives of the Ulagan district of the Altai Republic, where a large part of the Altaiskiy Reserve is located. The first successful experience of joint activities in this direction was the release of the music album "Altai Kabai» (The Cradle of Altai) in 2014, which praises the natural beauties, objects of the flora and fauna of the Altaisky Nature Reserve. The presentation of the album also took place in an unusual format: on the shores of the sacred Altyn Köl (Teletskoye Lake), a UNESCO World Natural Heritage Site. In 2017, the presentation of the new album "Altai Tele" took place, where Altai throat singing accompanied by a chamber orchestra sounded especially bright, and for the first time the traditional Altai kai was set to music. All songs of the new album are dedicated to the preservation of the natural heritage of the Altai Mountains. Altaisky Biosphere Reserve provided financial and informational support for the implementation of this project. Over 1,500 people from local and indigenous communities attended the concerts.

Altaisky Biosphere Reserve concluded 4 long-term agreements on cooperation with several indigenous communities living in the transition zone.

2.4.4 **Women's roles. Do women participate in community organizations and decision-making processes? Are their interests and needs given equal consideration within the biosphere reserve? What incentives or programmes are in place to encourage their representation and participation? (e.g. was a "gender impact assessment" carried out?) Are there any studies that examine a) whether men and women have different access to and control over sources of income and b) which sources of income do women control? If so, provide reference of these studies and/or a paper copy in an annex.**

Of the three deputy directors, two are women. Many women work in all departments: environmental education, science, the department of support, security service. Women and men are given equal opportunities. No special gender studies have been conducted.

2.4.5 **Are there any changes in the main protection regime of the core area(s) and of the buffer zone(s)?**

The regime of special protection of the reserve did not change.

2.4.6 **What research and monitoring activities have been undertaken in the biosphere reserve by local universities, government agencies, stakeholders and/or linked with national and international programs?**

On the territory of the Altaisky Biosphere Reserve, the only multi-media monitoring station in the Asian part of Russia operates that collects information on the background state of the environment and is consistent with the decision of the 4th session of the Intergovernmental Council of Hydrometeorology of the CIS countries (Almaty, October 1993).

Annually on the territory of the biosphere reserve third-party research organizations carry out scientific researches. During the field season, at least 5 expeditions take place on the territory of the reserve core. Students undergo practical training (8-15 students annually).

In 2019, 8 new agreements on joint scientific activity were concluded, in total 36 agreements in force with third-party research organizations.

For more than 5 years, the Altaisky Reserve has been cooperating with the Karst Research Institute (Slovenia) and with the University of Helsinki (Finland).

2.4.7 **How have collective capacities for the overall governance of the biosphere reserve (e.g. organization of new networks of cooperation, partnerships) been strengthened?**

To interact with third-party organizations that are interested in the management of the biosphere reserve, the reserve organizes personal meetings, seminars, round tables discussions and meetings. An important element of territorial management is the involvement of local people, representatives of indigenous peoples and communities in the planning process. For this, the

Altaisky Reserve initiated the creation of the non-profit organization “Lake Teletskoye Council” in 2009, the reserve became one of the founders. In 2013, the public council of local residents of the village of Yailu, the only settlement located in the core, was transformed into a legally legitimate organization: the territorial public self-goverment. “The Reserved village”. Both of these organizations are “platforms” for communication and collaboration, discussion of the outcomes of joint activities and planning for the future.

To organize scientific cooperation and involve third-party organizations and temporary employees to work in the reserve, we develop joint research programs, sign contracts for long-term scientific cooperation, and invite specialists to work on specific subjects.

2.4.8. **Please provide some additional information about the interaction between the three zones.**

The core zone completely coincides with the borders of the state reserve, in the core zone strict territory protection, the development of sustainable ecological tourism (without tourist accommodation), research activities are carried out. Settlements of local residents are located in the buffer and transition zones, many tourist organizations operate, farmers conduct business activities, and state organizations work. The reserve is a state institution and does not use land in the buffer zone and in the transition zone. Here, the reserve carries out research work, supervises the implementation of environmental legislation, inter alia actively interacts by concluding agreements with organizations and communities represented here.

2.4.9 **Participation of young people. How were young people involved in the organizations and community decision-making processes? How were their interests and needs considered within the biosphere reserve? What are the incentives or programs in place to encourage their participation?**

In recent years, young employees have come to work in the reserve. Now the average age of employees is 46 years. For young employees working in the reserve, vocational training (paid by the reserve) is provided, also further education or distance higher education is encouraged. In general, all employees, including young people, have free access to professional training. Employees of the reserve participate in decision-making at seminars where action plans are discussed, and can communicate with the administration of the reserve.

Other local young people, who do not work in the reserve, can get familiar with the activities of the reserve and express their opinions at meetings, seminars, discussions and other events held by the reserve. In addition, everyone has the opportunity to express his/her opinion in writing (and send it to the reserve, where all addresses and complaints are considered) or to personally communicate with the administration of the reserve.

Among the volunteers who come to the reserve, there are many young people. Students undergo practical training in the reserve.

3. ECOSYSTEM SERVICES:

3.1 **If possible, provide an update in the ecosystem services provided by each ecosystem of the biosphere reserve and the beneficiaries of these services.**
(As per previous report and with reference to the Millennium Ecosystem Assessment Framework and The Economics of Ecosystems and Biodiversity (TEEB) Framework (http://millenniumassessment.org/en/Framework.html and http://www.teebweb.org/publications/teeb-study-reports/foundations/)).
In terms of the concept of ecosystem goods and services, the main ecosystem services of the Altaisky State Natural Biosphere Reserve were identified. The assessment process used the definitions, basic approaches and principles set out in the Millennium Ecosystem Assessment / Assessment Framework.

The assessment presented in this report was carried out by the reserve staff on the basis of the following basic conditions:

- There were no significant changes in the state of ecosystems during the assessment period;

- There were no significant changes in human well-being during the evaluation period;

- The assessment is based on an analysis of water, forest, alpine and subalpine and high-mountain tundra ecosystems, including the population in the core area, the national and global importance of the reserve was taken into account;

- Qualitative characteristics and publicly available data were used in the assessment.

Types of ecosystems (biomes)	Ecosystem services of Altai State Reserve		
	Provision Services	**Regulatory Services**	**Cultural Services**
Aquatic ecosystems	Provision of: – fresh water – food	Regulation of: – water – climate – water streams – water cleaning	- Aesthetic value; - Recreational services. - Spiritual and religious significance; - Scientific and educational values
Forest ecosystems	Provision of: - Food; - wood, fibers; - energy sources; - biodiversity; - oxygen production; - medicinal raw materials; - fresh water.	Regulation: - air quality; - prevention of erosion; - climate; - water purification; - pollination; - noise exposure;	- Recreation and ecotourism; - Spiritual and religious significance; - Aesthetic value; - Cultural diversity; - Scientific and educational values
Alpine and subalpine ecosystems	Providing: - Food; - fresh water; - biodiversity; - energy sources; - oxygen production	Regulation: - climate - water purification; - air quality; - pollination;	- Recreation and ecotourism; - Aesthetic value; - Cultural diversity;

High mountain-tundra ecosystems	Providing: - wind energy; - food (scarce); - fresh water; - biodiversity.	Regulation: - climate - air quality; - water cleaning;	- Recreation and ecotourism; - Cultural diversity;

3.2 **Specify if there are any changes regarding the indicators of ecosystem services that are being used to evaluate the three functions (conservation, development and logistic) of the biosphere reserve. If yes, which ones and give details and update**.

There are currently no changes.

3.3 **Update description on biodiversity involved in the provision of ecosystems services in the biosphere reserve (e.g. species or groups of species involved).**

Altaisky Nature Reserve is one of the few corners of the planet where human activity has not led to irreversible changes in natural ecosystems. The Altai-Sayan mountain country, located in the center of the Eurasian continent, is included in the Global-200 list (WWF) - the list of virgin or slightly modified ecoregions of the world, in which 90% of the planet's biodiversity is concentrated.

The territory of the Altaisky Reserve includes five physico-geographical areas of three natural provinces. Almost all natural zones of the Altai Mountains are distinguished in the spectrum of altitudinal zonation: taiga low mountains and mid mountains, subalpine and alpine meadow middle mountains and high mountains, tundra-steppe high mountains, tundra middle mountains and high mountains, glacial-nival high mountains. Forests occupy 34% of the total area of the main zone. They are located in the lower and middle parts of the mountains, on the steep slopes of the valleys, as well as on the lower parts of the sloping manes. The lower treeline begins at the level of 436 meters (the level of Lake Teletskoye), and the upper treeline is different in other parts. So, in the southeast, the upper treeline is at the altitude of 2000-2200 m, in the northwest it decreases to the level of 1800-2000 m.
By the number of species of vascular plants, the Altaisky Reserve is the second largest in Russia after the Caucasian Biosphere Reserve; by species diversity it is among five Russian reserves.

The variety of natural and climatic zones of the Altaisky Reserve determined the exceptionally rich species composition of the flora and fauna on its territory. In the modern territory of the reserve, representatives of the total flora were recorded - 2051, of which: bryophytes - 550, vascular - 1500; lower plants - 1051, of which: algae - 668, mushrooms - 111, lichens - 272. Fern-shaped species - 36 species differ in a considerable variety. Of the total number of plants, more than 250 species belong to Altai-Sayan endemics, 120 species are relics of various eras of the Paleogene-Neogene and Quaternary periods.

During the existence of the Altaisky Reserve, 16 species of fish, 2 species of amphibians, 6 species of reptiles, 333 species of birds, 70 species of mammals were found on its territory.

At present, the fauna of mammals in the Altaisky Reserve includes 70 species belonging to 6 orders, 14 families, of which: carnivorous-15, artiodactyle -8, gnawing animals -24, hare-like-2, chiropterous animals -8, insectivores-11.

The following species are listed in the Red Book of the International Union for Conservation of Nature (IUCN): Uncia uncia (Schzeder, 1775), Ovis ammon ammon (Linnaeus, 1758), Haliaeetus albicilla (Linnaeus, 1758), Falco peregrinus (Tunstall, 1771). 32 species of plants (including 7 species of lichens), 35 species of birds and 1 species of insects - Parnassius appolo (Linnaeus, 1758) are listed in the Red Book of Russia.
Altaisky Nature Reserve includes 4 important bird areas (IBA), which are of international importance within the framework of the program "Important Bird Areas", developed by the international bird conservation association (BirdLife International).

3.4 **Specify whether any recent/updated ecosystem services assessment has been done for the biosphere reserve since its nomination/last report. If yes, please specify and indicate if and how this is being used in the management plan.**

All monitoring data and special scientific studies are collected in the Nature Chronicle of the Altaisky Reserve, which contains continuous long-term (over 10 and 20 years) observation parameters. Analysis of the available data allows us to assess the current state of ecosystems and their possible changes. Based on the analysis, decisions are made to conduct special in-depth research and develop programs, and tourism development plans.

4. THE CONSERVATION FUNCTION:

[This refers to programmes that seek to protect biodiversity at landscape and site levels and/or ecological functions that provide ecosystem goods and services in the biosphere reserve. While actions to address this function might be focused on core area(s) and buffer zone(s), ecosystem dynamics occur across a range of spatial and temporal scales throughout the biosphere reserve and beyond.]

4.1 **Significant changes (if any) in the main habitat types, ecosystems, species or varieties of traditional or economic importance identified for the biosphere reserve, including natural processes or events, main human impacts, and/or relevant management practices (since the last report).**

There were no changes.

4.2 **Describe the main conservation programmes that have been conducted in the biosphere reserve over the past ten years as well as current on-going ones. Note their main goals and the scope of activities, e.g. biotic inventories, species-at-risk, landscape analyses, conservation stewardship actions. Cross reference to other sections below where appropriate.**

- "Important bird areas of Russia "(IBA) is one of the leading subjects, the data of which are included in the "Chronicals of Nature "section. In the Altaisky Reserve, four Important Bird Areas are constantly monitored and studied; such rare species as the Black-throated Loon, Golden Eagle, White-tailed Eagle, Peregrine Falcon, Altai Ular (Altai snowcock), Gray Crane, Whooper Swan, Gray-headed Woodpecker, and others live on them.

- Since 2008, the scientific department of the Altaisky Reserve has been participating in the joint project of UNDP/GEF and the Country Reserve Fund “Monitoring of biodiversity in the specially protected natural territories of the Altai-Sayan Ecoregion”.
- Continuous work is implemented on the subject: "The current state of the Musk deer population in the protected areas of the Altai-Sayan Ecoregion and adjacent territories". Field studies was carried out in the Altaisky Reserve, the Republic of Khakassia, Tuva, and the south of the Krasnoyarsk Territory, as part of the Association of Nature Reserves and National Parks of the Altai-Sayan Ecoregion. The ultimate goal of the project is to assess the state of the musk deer population, both in protected and non-protected areas.
- In the Altaisky Reserve and the Khakassky Reserve hold joint expeditions to study reindeer. Topic: “The current state of the Rangifer tarandus valentinae population in the SPNA of the Altai-Sayan ecoregion and adjacent territories”. Rangifer tarandus valentinae - is listed in the (IUCN) Red List. Its peculiarity is that the reindeer populations are isolated from each other and, therefore, it is very vulnerable. Its population in the Altaisky Reserve lives on the border with the Khakassky reserves, (the site of Lykovs' settlement), and the Ubsunur Basin.
- “Monitoring the Snow leopard and Argali populations in the key territories of the Altai-Sayan Ecoregion.” This topic is one of the key and most significant for the Altaisky Reserve. The Snow leopard and the Altai mountain sheep are rare species of the entire Altai-Sayan Ecoregion are listed in the (IUCN) Red List. Employees of the Altaisky Reserve organize and conduct studies on these rare species in other habitats of Snow leopard and Argali.

4.3 **In what ways are conservation activities linked to, or integrated with, sustainable development issues (e.g. stewardship for conservation on private lands used for other purposes)?**

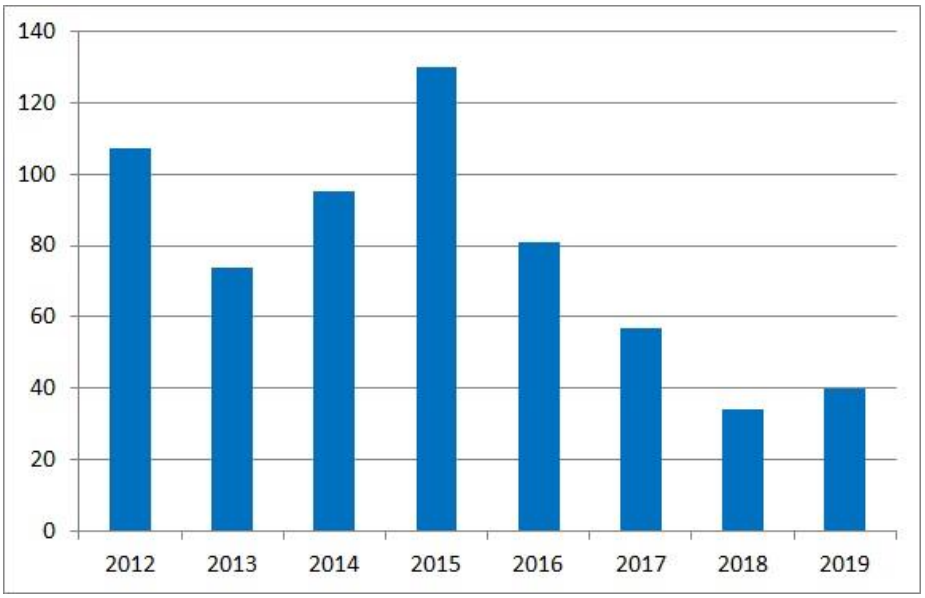
Security activities, patrolling and control are constantly carried out on the territory of the core and buffer zones. On the transition area, research is carried out by third-party research organizations, control is carried out by the state institutions, the reserve works in close collaboration with them. Thus, there are no sites uncovered the by monitoring activities.

4.4 **How do you assess the effectiveness of actions or strategies applied?**
(Describe the methods, indicators used).
An indicator of the effectiveness of environmental measures is the population size along with the general condition of the ecosystem. There are no visible signs of ecosystem degradation. The main methods and principles of the Reserve Security Department are described in detail in section 2.2.4.

The employees of the security department annually while patrolling travel long distances: walk more than 8000 km, ride more than 900 km, ride motor boats more than 8000 km. The table shows statistics on the number of violations of the special protection regime.

In 2019, employees of the security department (special forces group) underwent professional retraining at the training base of the Kalashnikov Shooting Center (Moscow Region).

The statistics on the number of violations of the special protection regime



4.5 **What are the main factors that influenced (positively or negatively) the successes of conservation efforts in the entire biosphere reserve? Given the experiences and lessons learned in the past ten years, what new strategies or approaches will be imost effective for conservation for sustainable development?**

Over the past 10 years, positive changes have taken place in the field of conservation of the protected core:

- Quality of documentation compiled by inspectors improved;

- Infrastructure and logistical base of the security service improved significantly;

- The system for recording and reporting violations of the protection regime (in cooperation with the biosphere reserves: Ubsunur Basin (Republic of Tuva) and Khakassky (Republic of Khakassia) works effectively;

- The training system for security personnel constantly improves;

- Infrastructure of winter camps for overnight stays improved;

- Alternative sources of electricity are actively used on the cordons and in Yailu village.

- The work to introduce the latest technology for fixing violations is implemented;

- Control system in places of mass visits by tourists is organized;

- A system of interaction with other services and neighboring protected areas has been established in matters of territory protection and preventive measures to combat poaching;

- Fire fighting equipment base is significantly improved.

- The reduction in the number of violations (poaching) on the territory of the core of the biosphere reserve is due to regular raids conducted by the employees of the protection department at certain times (spawning period of fish);

- An indirect factor in the reduction of poaching in the reserve is the result of the program of microcrediting conducted by the Altaisky Reserve (for the people to start their own business

activity). The program was being carried out from 2012 to 2016. in collaboration with the Katunskiy Biosphere Reserve, WWF Foundation and Citi Foundation.

4.6 **Other comments/observations from a biosphere reserve perspective.**

We have resumed monitoring of the ichthyofauna. Great attention is paid to the study of the ecosystems of Teletskoye Lake and other water bodies of the Altaisky Reserve. We are planning to update information and publish a book about rare vascular plants of the Altaisky Reserve. Vegetation monitoring will be continued as a part of the Environmental Monitoring Program.

5. THE DEVELOPMENT FUNCTION:

[This refers to programmes that address sustainability issues at the individual livelihood and community levels, including economic trends in different sectors that drive the need to innovate and/or adapt, the main adaptive strategies being implemented within the biosphere reserve, and initiatives to develop certain sectors such as tourism to complement and/or compensate for losses in other markets, employment, and community well-being over the past ten years]

5.1 **Briefly describe the prevailing trends over the past decade in each main sector of the economic base of the biosphere reserve (e.g. agriculture and forest activities, renewable resources, non-renewable resources, manufacturing and construction, tourism and other service industries).**

The main types of economy in the transition zone of the biosphere reserve (Turochaksky and Ulagansky municipalities) are: tourism, logging, wood processing, gold and granite mining, beekeeping, meat and dairy cattle breeding, collection of medicinal and technical raw materials and ferns, production of souvenirs and consumer goods from birch bark, Siberian pine. The sectors that generate the highest income for municipalities are industry, agriculture, and the service sector. Logging and wood processing is one of the main activities, one of the main sources of income for municipalities. The main problem is the lack of deep wood processing in the region and the Altai Republic

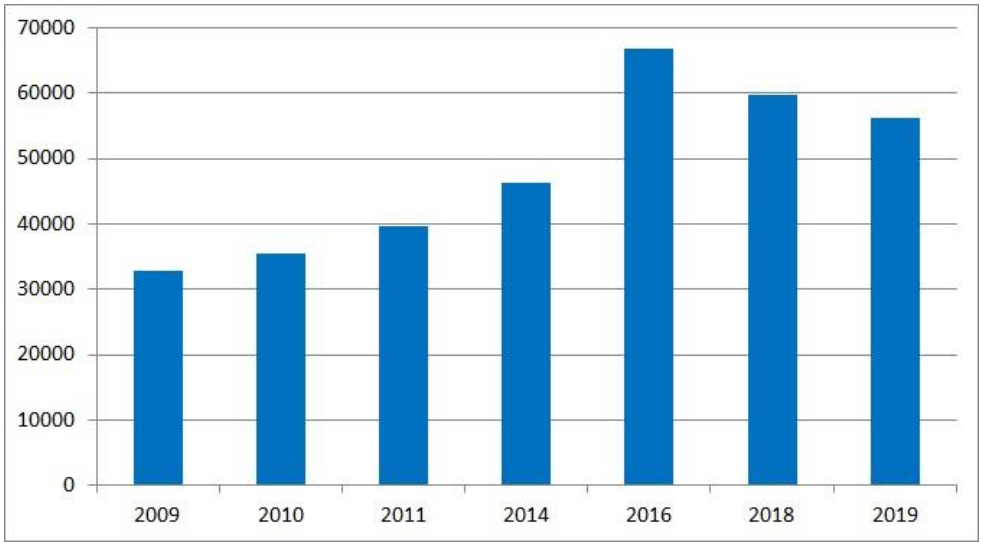
5.2 **Describe the tourism industry in the biosphere reserve. Has tourism increased or decreased since nomination or the last periodic review? What new projects or initiatives have been undertaken? What types of tourism activities? What effect have these activities had on the economy, ecology and society of the biosphere reserve? Are there any studies that examine whether designation of the area as a biosphere reserve has influenced the number of tourists? Please provide the bibliographic information of any studies and/or a paper copy in an annex.**

The development of tourism on the territory of the biosphere reserve is proceeding rapidly, but somewhat chaotically, due to the lack of an integrated plan for the development of tourist infrastructure in the municipalities, infrastructural undevelopment of transport communications, and insufficient professional training for tourism specialists. Over 10 years, the number of collective accommodation facilities and rural houses providing accommodation services to tourists has increased. According to the results of 2017, the tourist flow in the transition area amounted 259522 visits.

In Turochaksky district, large investment tourist projects are being implemented: the Teletsky ski resort, the construction of the Altai Village hotel complex. Separate camp sites, small hotels, guest cottages and houses are being constructed.

On the territory of the core of the biosphere reserve, the excursion routes of the Altaisky Reserve mainly visited in the summer season. All excursion routes are one-day; campfires and camping are not allowed. In 2019, a development program of eco-tourism for the period from 2020 to 2025 was designed out in the Altaisky Reserve.

The number of tourists in the core zone



5.3 **When applicable, describe other key sectors and uses such as agriculture, fishing, forestry. Have they increased or decreased since the nomination or the last periodic review? What kind of new projects or initiatives have been undertaken? What effect have they had on the economy and ecology of the biosphere reserve, and on its biodiversity? Are there any studies that examine whether designation as a biosphere reserve has influenced the frequency of its activities? If so, provide the bibliographic information of these studies and/or a paper copy in an annex.**

Any use of natural resources on the territory of the core of the biosphere reserve is prohibited.

In the transition area, we are developing agriculture, meat and dairy farming, logging and timber processing.

A study on the impact of the biosphere reserve on the local economy was not carried out.

5.4 **How do economic activities in the biosphere benefit local communities?**

Economic activity on the territory of the core of the biosphere reserve is not permitted. Altaisky Reserve contributes to the promotion of tourism services provided by local residents. At the popular attractions of the reserve - Korbu Falls (visited by 50-60 thousand tourists each season), local residents provide catering services for tourists, organize the sale of souvenirs made from local materials.

The logo of the Altaisky Reserve is used on the products by the local manufacturer of honey.

5.5 **How do you assess the effectiveness of actions or strategies applied?**
(Describe the methods, indicators).

We evaluate the effectiveness of the applied actions or strategies using a number of indirect indicators. Thus, over the past five years, confidence in the reserve among the local population, including indigenous peoples, has increased: more and more people want to work in the reserve (which is a sustainable indicator of reliability). We also evaluate the effectiveness by the number of people who want to cooperate with the reserve (the number of concluded agreements and contracts is an indicator). We also evaluate the effectiveness of the number of issued permission to visit (the more tourists are attracted by the reserve, the more permits are issued to tourists, the greater the benefit for local residents to accommodate and serve tourists).

5.6 **Community economic development initiatives. What programmes exist to promote comprehensive strategies for economic innovation, change, and adaptation within the biosphere reserve, and to what extent are they implemented?**

The non-profit partnership «Altai-Sayan Mountain Partnership» (Altaisky and Katunskiy BR are the founders) acted as the main executor of the program in the Ulagansky district (the transition area of the BR), the administration of the Ulagansky district and the «Ak Cholushpa» regional natural park gave an active support to the process. The microloan program for the local population is aimed at supporting the local community for the development of ecological and rural tourism, especially near specially protected natural areas. The number of ongoing projects for socio-economic development and the development of the "green economy" is 16, the total amount of money is 950 thousand rubles.

A grant support program for the local population was being implemented from 2014 to 2016 in the Altaisky Reserve and its main goal is to promote the development of civil society in Russian villages through supporting rural initiatives aimed at sustainable socio-economic development of regions and the development of a green economy, for example, rural and ecological tourism. The project was supported by the Eco Center "Zapovedniki" (Moscow) and the Altai-Sayan Mountain Partnership (Gorno-Altaysk) with the co-financing of the European Union. In total, 76 applications were submitted to the competition, 19 projects received approval from the competition commission. Within the competition, there were projects to equip individual elements of rural settlements (children's and sports grounds, squares, embankments), projects involving the creation of agro-tourist complexes, farms, a cafe of local cuisine, and projects to equip leisure places. All projects supported by grants were successfully implemented and 40% of them are ongoing, i.e. are sustainable.

5.7 **Local business or other economic development initiatives. Are there specific “green” alternatives being undertaken to address sustainability issues? What relationships (if any) are there among these different activities?**

A project is being implemented on the territory of the biosphere core to introduce alternative energy sources. By 2019, one village, eight cordons and two checkpoints of the Altaisky Biosphere Reserve, located in the core zone, are equipped with electric generators powered by solar energy, wind and water. This area of work of the Altaisky Biosphere Reserve is aimed at using renewable (alternative) energy sources to mitigate the effects of climate degradation by reducing the use of wood resources and carbon dioxide emissions. This project, in addition to

the life support function for the reserve staff, has a demonstration function - communities of local residents from the transition area have the opportunity to see that the use of environmentally friendly sources of electricity is possible and beneficial.

Within the programme of the grant support of the local population carried out by the Altaisky Biosphere Reserve (see paragraph 5.6.), the project by the community of indigenous peoples “Biy” was supported to purchase special equipment for processing wild plants (berries, grass, fern, etc.). Currently, the community takes an active part in farm fairs and is also part of the «Slow Food» movement.

Altaisky Reserve implements a project for the separate collection of garbage in the core. On the transition area, local authorities are officially responsible for waste management.

In 2017 - 2019 Altaisky Nature Reserve implemented the project “Let's put the batteries together!”. The idea of the reserve was supported by various departments and organizations of the region, the reserve installed special metal containers in the Government of the Altai Republic, the National Drama Theater, and the National Museum, the National Library. The containers were also installed in the visitor centers of the Altaisky Reserve and on the ecological and educational route “Korbu Waterfall”. In 2019, all containers were checked, the batteries were collected and sent for recycling in the city of Chelyabinsk to a special enterprise. The total weight of the assembled batteries was 175 kg.

5.8 **Describe the main changes (if there are any) in terms of cultural values (religious, historical, political, social, ethnological) and others, if possible with distinction between material and intangible heritage.**
(c.f. UNESCO Convention concerning the Protection of the World Cultural and Natural Heritage 1972 **and UNESCO Convention for the Safeguard of the Intangible Cultural Heritage 2003 (http://portal.unesco.org/en/ev.php-URL_ID=13055&URL_DO=DO_TOPIC&URL_SECTION=201.html and http://portal.unesco.org/en/ev.php-URL_ID=17716&URL_DO=DO_TOPIC&URL_SECTION=201.html)).**
In general, it can be stated that much attention is paid to the preservation of the cultural and intangible natural heritage on the territory of the biosphere reserve.

In 2011, two Orthodox chapels were built on the territory of the reserve core (in the village of Yailu and on the Bele cordon).

Altaisky Reserve cooperates with the Altai band "Altai Kai" - performers of traditional Altai throat singing.

On the transition area, the Turochaksky and Ulagansky municipalities are implementing support programs for indigenous peoples. Much attention of regional authorities is paid to the preservation and popularization of the ancient burial mounds "Pazyryk" in the Ulagansky district on the transition area of the biosphere reserve. Pazyryk culture is one of the cultures of Central Asia of the Scythian time. In the large territory of the Altai Moutains, the culture existed from the VI century BC to the II century BC, which left a bright mark in the form of unique funerary complexes. In 2018, the cultural object - “Treasures of the Pazyryk culture” of the Altai Republic was included in the Russian Tentative list of UNESCO World Heritage.

The Altaisky Biosphere Reserve uses decorative elements of ancient Pazyryk art in its official brand book to attract public attention to the rich history of the region and the need to protect archeological monuments.

5.9 **Community support facilities and services. What programmes in/for the biosphere reserve address issues such as job preparation and skills training, health and social services, and social justice questions. What are the relationships among them and with community economic development?**

Altaisky Nature Reserve regularly holds environmental awareness-raising events for students and schoolchildren, who are of a pronounced career-oriented nature. Every year, about 10-15 students from various universities undergo practical training in the Altaisky Reserve.

An agreement between the Government of the Altai Republic, the Altaiskiy Reserve and the Hevel company allowed the construction and commissioning of a diesel-solar power station in the village of Yailu (located in the core of the BR) in 2013.

Thanks to the agreement between the administration of the Altai Reserve and the Bee Line mobile operator, in 2014 a stable cellular connection appeared in the northern part of the BR core.

In 2018, the Altaisky Reserve together with the TPS "The Reserved Village" were negotiating with the Ministry of Health of the Altai Republic on the possibility of opening a new feldsher-midwife station in the village of Yailu (core of the BR). In 2019, the opening of the new feldsher-midwife station building in the village of Yailu.

5.10 **What indicators are in place to assess the effectiveness of activities aiming to foster sustainable development? What have these indicators shown?**

Special studies in this direction have not been carried out.

5.11 **What are the main factors that influenced (positively or negatively) the success of development efforts in the entire biosphere reserve? Given the experiences and lessons learned in the past ten years, what new strategies or approaches will be most effective?**

Positive factors:

- building partnerships with local residents through the creation of public associations: "Lake Teletskoye Council" TPS "The Reserved Village", which are active public organizations, where the reserve is also represented;

- an increase in the number of tourists and, as a result, an increase in the extra-budgetary income of the reserve and the involvement of local residents in the provision of tourist and excursion services;

- increase in budget financing and, as a result, updating the reserve's material and technical base;

- the ability to install wind and solar generators at all strong points of the reserve that were originally purchased with funds from various grants (including a grant from the US Fish and Wildlife Service);

- development of strategic documents (environmental monitoring programs, public relations strategies, etc.).

Negative factors:

- lack of funding for the Altaisky Reserve in terms of repairing the old infrastructure and building a new infrastructure. Today, the reserve does not have a full-fledged office and a modern-type visitor center;

- lack of housing and accommodation for seasonal workers and volunteers

We hope that the strategy for the development of eco-tourism developed in 2019 in the Altaisky Reserve for 2020 - 2025 will help to consolidate efforts to solve the accumulated problems of the reserve in this direction. Tourism is one of the important sectors of the economy in the buffer zone and the transition zone. Therefore, it is important to make informed decisions, to avoid conflict with the local population, not competing with them, but building partnerships in the field of ecological tourism.

6. THE LOGISTIC FUNCTION:

[This refers to programs that enhance the capacity of people and organizations in the biosphere reserve to address both conservation and development issues for sustainable development as well as research, monitoring, demonstration projects and education needed to deal with the specific context and conditions of the biosphere reserve.]

6.1 **Describe the main institutions conducting research or monitoring in the biosphere reserve, and their programmes. Comment on organizational changes (if any) in these institutions over the past ten years as they relate to their work in the biosphere reserve.**

The main research institutions conducting regular research on the territory of the Altaisky Biosphere Reserve are: Institute for Water and Environmental Problems of the Siberian Branch of the Russian Academy of Sciences (IWEP), Central Siberian Botanical Garden of the Siberian Branch of the Russian Academy of Sciences.

The Institute for Water and Environmental Problems of the Siberian Branch of the Russian Academy of Sciences annually monitors the hydrophysical, hydrochemical, biogeochemical and hydrobiological characteristics of Lake Teletskoye. Since 2018, in cooperation with the Altaisky Reserve, IWEP has expanded the range of hydrobiological studies of the littoral of Lake Teletskoye.

Scientists of the Central Siberian Botanical Garden of the Siberian Branch of the Russian Academy of Sciences are studying the floristic composition and phytocenotic diversity of plant communities in the reserve. In the past five years, in collaboration with the scientific department of the Altaisky Reserve, the subject has been developed to identify invasive plant species.

6.2 **Summarize the main themes of research and monitoring undertaken over the past ten years and the area(s) in which they were undertaken in order to address specific questions related to biosphere reserve management and for the implementation of the management plan (please refer to variables in Annex I).**

(For each specific topic provide reference citations. Provide the full citations alphabetically by lead author at the end of Section 6 or in a separate annex).

The main subjects of research and monitoring over the past ten years are:

- “Important Bird Areas of Russia” (IBA) is one of the leading subjects, the data of which are included in the section “Chronicles of Nature”. IBA are territories of

special importance in international importance. In the Altaisky Reserve, four Important Bird Areas are constantly monitored and studied; such rare species as the Black-throated Loon, Golden Eagle, White-tailed Eagle, Peregrine Falcon, Altai Ular, Gray Crane, Whooper Swan, Gray-headed Woodpecker, and others live there;

- Since 2007, the Scientific department of the Altaisky Reserve has been participating in the project "Monitoring of biodiversity in the specially protected natural areas of the Altai-Sayan Ecoregion";
- "The current state of the Musk deer population in the protected areas of the Altai-Sayan Ecoregion and adjacent territories". The ultimate goal of the project is to assess the state of the Musk deer population, both in protected and non-protected areas;
- "The current state of the Rangifer tarandus valentinae population in the protected areas of the Altai-Sayan Ecoregion and adjacent territories". The Rangifer tarandus valentinae is listed in the International Red List (IUCN). Its peculiarity is that the reindeer populations are isolated from each other and, therefore, it is very vulnerable;
- "Monitoring the Snow leopard and Argali population in key areas of the Altai-Sayan Ecoregion" This subject is one of the key and most significant for the Altaisky Reserve. The Snow leopard and the Altai Mountain sheep are rare species, the whole Altai-Sayan Ecoregion, are listed in the International Red List (IUCN) Employees of the Altaisky Reserve organize and conduct work on the study of these rare species;
- "Monitoring plant communities and invasive species".

6.3 **Describe how traditional and local knowledge and knowledge from relating to management practices have been collected, synthesized and disseminated. Explain how such knowledge is being applied to new management practices, and how and if it has been integrated into training and educational programmes.**

The traditional knowledge of local residents of the transition zone of the Altaisky Biosphere Reserve is mainly related to nature management: housekeeping, gathering wild plants (berries, herbs, ferns, pine cones, etc.). A special place in the traditional beliefs of the peoples of Altai is given to nature, which they deify. Altaisky Nature Reserve collects and summarizes traditional knowledge; monthly, a new informational issue of the Traditions of the Altaisky Nature Reserve is published on the reserve's website **http://www.altzapovednik.ru/info/publikatcii/traditcii-zapovednogo-Altaya.aspx**

Altaisky Nature Reserve promotes the promotion of traditional Altai throat singing - with the support of the nature reserve two albums of the "Altai Kai" band, founded by the representatives of the indigenous people — the telengits, were published.

6.4 **Environmental/sustainability education. Which are the main educational institutions ("formal" – schools, colleges, universities, and "informal" services for the general public) that are active in the biosphere reserve? Describe their programmes, including special school or adult education programmes, as these contribute towards the functions of the biosphere reserve. Comment on organizational changes (if any) in institutions and programmes that were identified in the biosphere reserve ten or so years ago (e.g. closed**

down, redesigned, new initiatives). Refer to programmes and initiatives of UNESCO Associated Schools networks, UNESCO Chairs and Centers where applicable.

Together with the school board of the village of Yailu (located on the core of the BR), work has been ongoing for more than 7 years on the implementation of the programs "Nature and Children", "Teletskaya School of Children and Youth Ecotourism", "Border Geography" aimed at attracting children and youth to conservation UNESCO World Heritage Site and the sustainable development of the biosphere. Information on the work in this direction regularly appears on the reserve's website in a separate section of Teletskaya School. **http://www.altzapovednik.ru/ekoprosveschenie/teletskaya-shkola.aspx**

Altaisky Reserve signed an agreement on cooperation in the field of education and environmental education with UNESCO Associated Schools (Republican Classic Lyceum and Republican National Gymnasium). In 2017, the joint project "Preservation Room" was implemented, during which scientists and employees of the reserve conducted a series of informative lectures for schoolchildren of the Associated Schools.

Altaisky Reserve constantly cooperates with the Gorno-Altaisk State University (GASU). Every year, environmental events are held with the participation of students from GASU. Since 2016, GASU has included lectures by Altaisky Reserve employees in the compulsory training program for students of the naturalgeographical department.

6.5 **How do you assess the effectiveness of actions or strategies applied?**
(Describe the methods, indicators).

Special studies on this issue have not been conducted. But the interest in the reserve shown by the local community can be considered as a positive influence.

6.5.1 **Describe the biosphere reserve's main internal and external communication mechanisms/systems**

Since the reserve staff is not numerous, face-to-face communication is the most suitable internal communication strategy - we constantly hold meetings, briefings, and round tables discussion where people are directly present.

For external communication, the following methods are used:

- Informing people about the reserve's activities, its main tasks and the special protection regime (at the local level: through the reserve's newspaper - "The Reserve without Borders", the local newspaper "Istoki", at the regional and federal levels: through the website, the reserve's social media pages, regional and federal media, radio);

- Holding regular meetings and participating in public meetings in order to understand the expectations and concerns regarding the reserve's activities, explaining the reserve's main tasks and activities during lectures organized in different parts of the region.

6.5.2 **Is there a biosphere reserve website? If so, provide the link.**

http://www.altzapoved.ru/

The official website of the Altaisky Biosphere Reserve is in Russian. There is a brief information in English and German. In 2019, the logo of the Altaisky Reserve on the main page of the site was supplemented with the element “10 years in the MAB programme”

6.5.3 **Is there an electronic newsletter? How often is it published? (provide the link, if applicable).**

The systematic distribution of press releases of the Altaisky Reserve includes 142 email addresses of district, regional and federal mass media (57 press releases for 2019)

6.5.4 **Does the biosphere reserve belong to a social network (Facebook, Twitter, etc.)? Provide the contact.**

https://www.facebook.com/altzapoved/, https://www.facebook.com/groups/altzapovednik/

https://twitter.com/altzapovednik

https://www.instagram.com/altaiskiyzapovednik/

https://altzapoved.livejournal.com/

https://www.youtube.com/user/altzapoved

https://www.flickr.com/photos/altzapoved/albums

https://zen.yandex.ru/altzapoved

https://vk.com/altzapovednik

https://ok.ru/altayskyza

6.5.5 **Are there any other internal communication systems? If so, describe them.**

-

6.6 **Describe how the biosphere reserve currently contributes to the World Network of Biosphere Reserves and/or could do so in the future.**

6.6.1 **Describe any collaboration with existing biosphere reserves at national, regional, and international levels, also within regional and bilateral agreements.**

Altaisky Biosphere Reserve is a member of the Association of Nature Reserves and National Parks of the Altai-Sayan Ecoregion. Activities of the Association:

- Creation of a unified regional system for the conservation and study of natural systems and environmental education of the population through the use of intellectual potential, material and financial resources;

- Development of programs and model projects, monitoring of natural systems in protected areas and adjacent territories by full-time employees of reserves, national parks, employees of the Siberian Branch of the Russian Academy of Sciences;
- Development and publication of teaching aids and scientific articles on the organization of protection, scientific activities and educational work in specially protected areas;
- Interaction on the formation in the public mind of the importance of specially protected natural areas for nature conservation, raising their prestige to a level worthy of national heritage sites.

Altaisky BR takes part in the long-term interregional programs of the Association. One of the programmes: "Ensuring the long-term conservation of biodiversity in the Altai-Sayan Ecoregion". The goal of the program is to ensure the conservation of the biological diversity of the Altai-Sayan Ecoregion in the long term through the development of sustainable ecoregional environmental cooperation.

In 2009, the Altaisky BR and Katunskiy BR created the non-profit organization «Altai-Sayan Mountain Partnership». Altaisky Reserve was in the Altai-Sayan Mountain Partnership from 2009 to 2017. The mission of the Altai-Sayan Mountain Partnership is to promote the development of local Altai-Sayan communities and the preservation of natural and cultural values. During its activities, the Altai-Sayan Mountain Partnership has become recognizable not only in the republic, but also beyond its borders thanks to the active work of seminars and conferences, environmental campaigns and raids, publishing methodological manuals and much more.

The Altaisky Biosphere Reserve has established cooperation with the biosphere reserves of the Altai-Sayan Ecoregion, the Altaisky BR has borders the Khakassky BR and the Ubsunur Basin Biosphere Reserve. Cooperation is conducted in the field of conservation of wildlife from poachers and conducting joint scientific research.

Since 2014, the Altaisky Biosphere Reserve has been a member of the International Alliance of Protected Areas (IAPA), within the framework of which it participates in the development and implementation of international biodiversity programmes.

6.6.2 **What are the current and expected benefits of international cooperation for the biosphere reserve?**

Current advantages of international cooperation:

- Methodological assistance in arranging the territory, organizing research and working with students and volunteers;

- Sharing experiences in creating modern educational and other information materials, information boards, leaflets, eco-souvenirs, books, posters, etc.;

- Acquaintance with the visitor centers of other biosphere reserves allows us to set the task of organizing the visititor center of the Altaisky Reserve in accordance with modern world trends.

Prospects for international cooperation are: joint research programs, the exchange of specialists (in order to show them the specifics of nature reserves in different countries), the introduction of best international practices.

6.6.3 **How do you intend to contribute to the World Network of Biosphere Reserves in the future and to the Regional and Thematic Networks?**

Altaisky Nature Reserve is one of the few corners of the planet where human activity has not led to irreversible changes in natural ecosystems. The Altai-Sayan mountain country, located in the center of the Eurasian continent, is included in the Global-200 list (WWF) - the list of virgin or slightly modified ecoregions of the world, in which 90% of the planet's biodiversity is concentrated.

The variety of natural and climatic zones of the Altaisky Reserve determined the exceptionally rich species composition of the flora and fauna on its territory. In terms of species diversity of flora and fauna, the Altaisky Reserve along with the Caucasian Biosphere Reserve is one of the first in Russia among Specially Protected Natural Territories.

Altaisky Nature Reserve includes 4 Important Bird Areas (IBA), which are of international importance within the framework of the program “Important Bird Areas”, developed by the international bird conservation association (BirdLife International).

The territory of the biosphere reserve is extremely rich in fresh water, has a dense hydrographic network. The bulk of the rivers belong to the basins of Teletskoye Lake and the Chulyshman River, the main river of Eastern Altai. Rivers are characterized by main streams and waterfalls. The most famous of them are Korbu waterfall (12.8 meters high) and Uchar waterfall, the largest waterfall in Eurasia on the Chulcha River, a 160-meter cascade of small waterfalls.

Altaisky Nature Reserve is the largest lake country in the territory of which there are 2560 medium and small lakes, the largest of which is Lake Teletskoye. Most of the waters of Lake Teletskoye (11757 ha) are included in the core of the Altaiskiy Reserve. Lake Teletskoye, the second largest volume of fresh, clean water of the highest quality in Russia by volume (after Lake Baikal). 16 species of fish live in the lake, including narrow-local endemic species (Coregonus lavaretus natio smitti and Coregonus lavaretus Pravdinellus). Many other animal groups are also associated with the lake, including 15 species of birds and 9 species of mammals included in the Red Book of the Altai Republic.

In the transition zone of the BR, indigenous small peoples live compactly: Tubalars, Kumandins, Chelkans, Telengits. In some villages of the region, national schools are preserved in which the educational process is conducted in the language of the ethnic group. Many indigenous people strive to preserve the culture of their people, preferring to speak their native language in families, eating traditional foods and dishes, leading a familiar lifestyle - cattle breeding, horse breeding, hunting, gathering.

6.7 **What are the main factors that influenced (positively or negatively) the success of activities contributing to the logistic support function? Given the experiences and lessons learned in the past ten years, what new strategies or approaches will be favored as being most effective?**

The main factor that influenced the success of events contributing to the development of the logistics support function is building a strong network of partnerships with various organizations: state and non-profit, research and educational.

Thanks to increased budget funding, new opportunities have appeared.

Extrabudgetary funds were also attracted in the form of grants, which also helped to implement important projects.

In our opinion, it is most effective to work in collaboration with state and non-governmental organizations to achieve common goals.

6.8 **Other comments/observations from a biosphere reserve perspective.**

We believe that the most effective strategy in the future is:

- to protect the reserve, it is important to maintain a combination of the permanent residence of inspectors in cordons with raid trips to key areas during fish spawning and bird nesting;

- in the field of scientific research, it is necessary to attract more third-party specialists on those scientific subjects that are not covered by the employees of the scientific department of the reserve, to conduct joint research;

- in the direction of environmental education, for a full-fledged “face to face” work with visitors of the reserve , a full-fledged visitor center with an exposition corresponding to modern requirements is required;

- from the point of view of tourism development, it is necessary to continue the policy of reducing the time spent by tourists in the core zone, only excursions and, as before, the prohibition of campfires and camping.

7. GOVERNANCE, BIOSPHERE RESERVE MANAGEMENT AND COORDINATION:

[Biosphere reserve coordination/management coordinators/managers have to work within extensive overlays of government bodies, business enterprises, and a “civil society” mix of non-governmental organizations and community groups. These collectively constitute the structures of governance for the area of the biosphere reserve. Success in carrying out the functions of a biosphere reserve can be crucially dependent upon the collaborative arrangements that evolve with these organizations and actors. Key roles for those responsible for the biosphere reserve coordination/management are to learn about the governance system they must work within and to explore ways to enhance its collective capacities for fulfilling the functions of the biosphere reserve.]

7.1 **What are the technical and logistical resources for the coordination of the biosphere reserve?**

To manage the biosphere reserve there is an Administration (a state agency funded from the federal budget). The administration of the reserve is subordinate to the federal state authority - the Ministry of Natural Resources and Ecology of Russia, which coordinates claims for the position of director, coordinates long-term plans and arrangement of objects, and forms the development policy of the biosphere reserve.

The Administration has created several departments: the Department of science and development of the biosphere territory, the Department of environmental education and cognitive tourism, the Department of security (protection of territories), the Department of resource management. Departments correspond to the main tasks facing the biosphere reserve. Each department organizes and coordinates specific activities of the biosphere reserve.

7.2 **What is the overall framework for governance in the area of the biosphere reserve? Identify the main components and their contributions to the biosphere reserve.**

Governing Body Name / Official Website	Contribution
Ministry of Natural Resources and Ecology of the Russian Federation **http://www.mnr.gov.ru/**	The Ministry of the Russian Federation coordinates activities, defines the main areas of activity, as well as the objectives and goals of the development of reserves and organizes state funding for the management of reserves.
Federal Service for Supervision of Natural Resources **http://rpn.gov.ru/**	Supervises the activities of the administration of the reserve (in terms of compliance with environmental laws)
Other control and supervisory bodies of the Russian Federation	Supervise the activities of the administration of the reserve (in terms of compliance with the law)
Administration of Turochaksky and Ulagansky districts and Artybash rural settlement **https://www.turochak-altai.ru/** **http://xn----7sbabmj7bof9c.xn--p1ai/** **http://asp-artibash.ru/**	Administrations arrange the living conditions for the whole Yailu. Supervise the work of hospitals, schools, kindergartens of local media in the
The Reserve Administration Federal State Budgetary Institution "Altaisky State Natural Biosphere Reserve" **http://www.altzapovednik.ru/**	Organizes territory protection, scientific research, environmental education, both in the reserve and beyond. Organizes the logistics of the reserve.

7.3 **Describe social impact assessments or similar tools and guidelines used to support indigenous and local rights and cultural initiatives (e.g. CBD Akwé:Kon guidelines, Free, Prior, and Informed Consent Programme/policy, access and benefit sharing institutional arrangements, etc.).**

No special studies have been carried out on this issue.

7.4 **What (if any) are the main conflicts relating to the biosphere reserve and what solutions have been implemented?**

Most often, conflicts with the local population arise in the newly created specially protected natural areas. As the Altaisky Reserve was founded in 1932, the local population is well acquainted with the strict regime of the core area. To prevent conflicts arising from the redistribution of funds in the tourism sector, the Altaisky Reserve does not compete with local residents engaged in the tourism business and tour operators, but encourages and promotes their activities.

7.4.1 **Describe the main conflicts regarding access to, or the use of, resources in the area and the relevant timeframe. If the biosphere reserve has contributed to preventing or resolving some of these conflicts, explain what has been resolved or prevented, and how this was achieved for each zone?**

There are no such examples for the described period.

7.4.2 **Describe any conflicts in competence among the different administrative authorities involved in the management of the area comprising the biosphere reserve.**

Communities of local residents and indigenous peoples in recent years have taken an active stand on environmental issues. In 2016 - 2017 the local population actively opposed gold mining in the immediate vicinity of Lake Teletskoye

http://gold.batenka.ru/ https://rg.ru/2017/08/31/reg-sibfo/teleckoe-ozero-na-altae-okazalos-pod-ugrozoj-iz-za-zolotodobychi.html

In 2017, local residents held several rallies against deforestation.

https://www.sibreal.org/a/29060325.html

7.4.3 **Explain the means used to resolve these conflicts, and their effectiveness. Describe its composition and functioning, resolution on a case-by-case basis. Are there local mediators; if so, are they approved by the biosphere reserve or by another authority?**

Long-term work with the population of the Altaisky BR actively influenced the growth of environmental awareness of the population. The local population expressed their protest against gold mining and deforestation actively involving journalists and the media to draw attention to this issue. Representatives from the Altaisky Reserve advised active groups of local residents.

7.5 **Updated information about the representation and consultation of local communities and their participation in the life of the biosphere reserve:**

7.5.1 **Describe how local people (including women and indigenous people) are represented in the planning and management of the biosphere reserve (e.g., assembly of representatives, consultation of associations, women's groups).**

Local residents (without any age or gender discrimination) participate in the management of the reserve:

- Official meetings of the reserve administration with local authorities are held regularly;

- The Altaisky Nature Reserve has a Scientific and Technical Council, which includes representatives of the trade union, local residents, and indigenous peoples;

- Each resident of the village of Yailu (located on the territory of the core) has the opportunity to contact the administration of the reserve personally or by submitting a written request or complaint (there is an official mechanism for handling complaints and written requests, an answer is prepared for each request);

- To interact with local communities, we actively use cooperation with non-profit organizations "Lake Teletskoye Council" and TPS "The Reserved Village", which are held at least 2 times a year. Representatives from the Altaisky Reserve always take part in meetings. A variety of issues regarding the development of the are considered.

7.5.2 **What form does this representation take: companies, associations, environmental associations, trade unions (list the various groups)?**

Meetings and associations (in the case of the Scientific and Technical Council of the reserve)

7.5.3 **Indicate whether there are procedures for integrating the representative body of local communities (e.g., financial, election of representatives, traditional authorities).**

“Lake Teletskoye Council” is a non-profit organization and The Altaisky Nature Reserve is a co-founder of the council. The TPS “The Reserved Village” includes the director of the reserve.

The reserve ensured participation of the Scientific and Technical Council , representatives of the trade union, local residents, and indigenous peoples .

7.5.4 **How long-lived is the consultation mechanism (e.g., permanent assembly, consultation on specific projects)?**

Periodic meetings are held at least 2 times a year

7.5.5 **What is the impact of this consultation on the decision-making process (decisional, consultative or merely to inform the population)?**

The Scientific and Technical Council gathers to discuss the main areas of the reserve's activity and prepares recommendations for the administration of the reserve.

7.5.6 **At which step in the existence of a biosphere reserve is the population involved: creation of the biosphere reserve, drawing up of the management plan, implementation of the plan, day to day management of the biosphere reserve? Give some practical examples.**

The population participates in the current activities of the reserve through some representatives in the activities of the Scientific and Technical Council. The reserve also has pages on social networks where visitors can express their opinion.

7.6 **Update on management and coordination structure:**

7.6.1 **Describe any changes regarding administrative authorities that have competence for each zone of the biosphere reserve (core area(s), buffer zone(s) and transition area(s))? If there are any changes since the nomination form/last periodic review report, please submit the original endorsements for each area.**

In 2016, the position of Deputy Director for Development of the Biosphere Territory was introduced (in addition to Scientific department), in 2018 the position of Deputy Director for Cognitive Tourism was introduced (in addition to Environmental education department)

7.6.2 **Update information about the manager(s)/coordinator(s) of the biosphere reserve including designation procedures.**

Position	Appointment Procedure
Director	Appointed by the Ministry of Natural Resources and Ecology of the Russian Federation in agreement with the authorized representative of the President of the Russian Federation in the Siberian Federal District.
Deputy Director for Biosphere Development and Scientific Research	Appointed by the director of the reserve
Deputy Director for Security service	Appointed by the director of the reserve
Deputy Director for Environmental Education and Cognitive Tourism	Appointed by the director of the reserve

7.6.3 **Are there any changes with regard to the coordination structure of the biosphere reserve? (if yes, describe in details its functioning, composition and the relative proportion of each group in this structure, its role and competence.). Is this coordination structure autonomous or is it under the authority of local or central government, or of the manager of the biosphere reserve?).**

The structure of the reserve:

- Department of science and development of the biosphere territory (coordinates and conducts research on the territory and the waters of the reserve, the department is responsible for opinion test of the population and tourists, prepares the necessary periodic reports);

- Security (Territory Protection) Department (deals with the protection of biodiversity, helps tourists and local residents, raises awareness);

- Department of Environmental Education and the Development of Cognitive Tourism (organizes events and thematic exhibitions for preschool children, schoolchildren and students, organizes tourism events);

- Resource Management Department (responsible for the procurement of goods necessary for the reserve: equipment, gasoline, etc., organizes construction and repairing work in the reserve);

- Accounting Department (responsible for the financial activities of the reserve).

The administration of the reserve is a separate legal entity. Moreover, the coordination of activities (the main directions of development goals and objectives) is carried out by the Ministry of Natural Resources and Ecology of the Russian Federation on behalf of the Government of the Russian Federation.

7.6.4 **How has the management/coordination been adapted to the local situation?**

The management structure of the reserve is fully adapted to the local situation in accordance with the objectives of the reserve. Since there is a need to preserve and popularize the culture of

indigenous peoples, specialists who are specialists in history and know the language of indigenous peoples work in the reserve.

In the summer, when the number of visitors to the reserve increases, additional employees are involved. To conduct larger-scale research, volunteers are involved and cooperation with other research organizations has been established.

For the prevention of violations in the core, as well as the occurrence of natural fires, the security department collaborates with the state organization Avialesookhrana (The Aerial Forest Protection Service) and the Ministry of the Internal Affairs of the Republic of Altai.

7.6.5 **Was the effectiveness of the management/coordination evaluated? If yes, was it according to a procedure?**

On a quarterly basis, the Ministry of Natural Resources of the Russian Federation evaluates the main indicators of the current activity of the Altaisky Reserve. The reserve also sends an annual detailed report on all aspects of its activities to the Ministry.

A special audit of the biosphere reserve was not performed.

7.7 **Update on the management/cooperation plan/policy:**

7.7.1 **Are there any changes with regard to the management/cooperation plan/policy and the stakeholders involved? If yes, provide detailed information on process for involvement of stakeholders, adoption and revision of the plan.**

Annual work plans are compiled for various activities of the reserve, including a work plan with different categories of the population and stakeholders. There is no special work plan for engaging stakeholders.

7.7.2 **Describe contents of the management/cooperation plan (provide some examples of measures and guidelines). Is the plan binding? Is it based on consensus?**

Currently, the reserve does not have a management plan as a separate document, but there are work plans for each type of activity of the reserve. A detailed description of these plans can be found in paragraph 2.3.1.

7.7.3 **Describe the role of the authorities in charge of the implementation of the plan. Describe institutional changes since the nomination form/last periodic review report. Please provide evidence of the role of these authorities.**

There is no information, since there is no integrated plan.

7.7.4 **Indicate how the management plan addresses the objectives of the biosphere reserve.**

There is no information, since there is no integrated plan.

7.7.5 **What are the progresses with regard to the guidelines of the management/cooperation plan/policy?**

There is no information, since there is no integrated plan.

7.7.6 **Were there any factors and/or changes that impeded or helped with the implementation of the management/coordination plan/policy? (Reluctance of local people, conflicts between different levels of decision-making).**

There is no information, since there is no integrated plan.

7.7.7 **If applicable, how is the biosphere integrated in regional/national strategies? Vice versa, how are the local/municipal plans integrated in the planning of the biosphere reserve?**

(Please provide detailed information if there are any changes since the nomination form/last periodic review report).

The Altaisky State Nature Biosphere Reserve is a national treasure. Federal law states that the objects of the reserve have special environmental, scientific, cultural and aesthetic significance for the whole country. The reserve is a part of the federal system of protected areas, and at the same time, since it is located in the Altai Republic, the reserve is also the main element of regional nature reserves. So this is a part of a network of specially protected natural areas of Russia and the planet. So far, local plans have not been integrated into the planning of the reserve. Although the process of debates, coordination and integration of plans are discussed.

8. CRITERIA AND PROGRESS MADE:

[Conclude by highlighting the major changes, achievements, and progress made in your biosphere reserve since nomination or the last periodic review. How does your biosphere reserve fulfill the criteria. Develop justification for the site to be a biosphere reserve and rationale for the zonation. What is lacking, and how could it be improved? What can your biosphere reserve share with others on how to implement sustainable development into practice?]

Brief justification of the way in which the biosphere reserve fulfills each criteria of article 4 of the Statutory Framework of the World Network of Biosphere Reserves:

1. **"Encompass a mosaic of ecological systems representative of major biogeographic region(s), including a gradation of human interventions".**

   (The term "major biogeographic region" is not strictly defined but it would be useful to refer to the Udvardy classification system (http://www.unep-wcmc.org/udvardys-biogeographical-provinces-1975_745.html)).

The territory of the biosphere reserve belongs to the biogeographic region of the Altai-Sayan mountain country. According to the classification of the biogeographic provinces of the Udvardy Palearctic, the reserve is located in the taiga biome of the South Siberian (mountain taiga) province, in the immediate vicinity of the lake province of Ubsu-Nur. The junction of the provinces and intrazonality, as well as the complex geological history of the region, determine the combination of natural features inherent in various biomes. Due its high biological diversity,

the reserve is allocated as an independent geobotanical and floristic region of the Altai Republic « the Altaisky Nature Reserve».

Almost all natural zones of Altai Mountains stand out in the spectrum of altitudinal zonality of the reserve: taiga low mountains and midlands, subalpine and alpine meadow middle mountains and highlands, tundra-steppe highlands, tundra middle mountains and highlands, glacial-nival highlands.
Forests occupy 34% of the total area of the main zone. They are located in the lower and middle parts of the mountains, on the steep slopes of the valleys, as well as on the lower parts of the sloping manes. The lower treeline begins at the level of 436 meters (the level of Lake Teletskoye), and the upper one is different in different parts. So, in the southeast, the upper treeline is at an altitude of 2000-2200 m, in the northwest it decreases to the level of 1800-2000 m.
The varying degrees of anthropogenic transformation mainly affect the taiga low mountains and mid mountains in the territories near Lake Teletskoye of the reserve and Lake Teletskoye itself. Mountain taiga complexes are most affected on the territory of the transition zone in the immediate vicinity of the villages of Iogach and Artybash in the basins of the Pyzha, Iogach, Samysh rivers, as well as the territory of the buffer zone in the basins of the Oyer, Chuika and Biyka rivers, where logging was carried out by forestries.

2. “Be of Significance for biological diversity conservation”.

The variety of natural and climatic zones of the Altaisky Reserve caused an exceptionally rich species composition of flora and fauna on its territory.

The total number of flora representatives in the modern territory of the reserve are 2051: bryophytes - 550, vascular - 1500; lower plants - 1051, of which: algae - 668, mushrooms - 111, lichens - 272. Significant diversity are fern-like - 36 species.

Out of the total number of plants, more than 250 species belong to Altai-Sayan endemics, 120 species are relics of various eras of the Paleogene-Neogene and Quaternary periods.

During the existence of the Altaisky Reserve, 16 species of fish, 2 species of amphibians, 6 species of reptiles, 326 species of birds, 70 species of mammals were found on its territory.

At present, the fauna of mammals in the Altaisky Reserve includes 70 species belonging to 6 orders, 14 families, of which: carnivorous –15, scythe — 8, rodents — 24, double-toothed rodents – 2, bats – 8, and insectivores – 11.

The following species are listed in the Red List of the International Union for Conservation of Nature (IUCN): Uncia uncia (Schzeder, 1775), Ovis ammon ammon (Linnaeus, 1758), Haliaeetus albicilla (Linnaeus, 1758), Falco peregrinus (Tunstall, 1771).

32 species of plants are listed in the Red List of Russia, including 7 species of lichens, 35 species of birds and 1 species of insects - Parnassius appolo (Linnaeus, 1758).

The following species of birds are listed in the Red Book of Russia: Pelecanus onocrotalus (Linnaeus, 1758),, Pelecanus crispus (Bruch, 1832), Platalea leucorodia (Linnaeus, 1758), Ciconia nigra (Linnaeus, 1758), Eulabeia indica (Lathan 1787), Anthropoides virgo (Linnaeus, 1758), Aqila heliaca (Savigny, 1809), Aqila chrysaetos (Linnaeus, 1758), Haliaeetus albicilla (Linnaeus, 1758), Gavia arctica (Linnaeus, 1758), Falco peregrinus (Tunstall, 1771), Phoenicopterus roseus (Pallas, 1811), Rufibrenta ruficollis (Pallas, 1769), Anser indicus (Lathan 1790), Cygnopsis cygnoides (Linnaeus, 1758), Anas Formosa (Georgi 1775), Aythya nyroca

(Linnaeus, 1758), Pandion haliaetus (Linnaeus, 1758), Circus macrourus (Gmelin, 1771), Aquila rapax (Temminck, 1821), Aquila heliaca (Savigny, 1809), Aquila chrysaetos (Linnaeus, 1758), Haliaeetus leucoryphus (Pallas, 1769), Gypaetus barbatus (Linnaeus, 1758), Falco rusticolus (Linnaeus, 1758), Falco cherrug (J.E. Gray 1834), Falco naumanni (Fleischer, 1818), Anthropoides virgo (Linnaeus, 1758), Otis tarda (Linnaeus, 1758), Chlamydotis undulate (Jaguin 1784), Burhinus oedicnemus (Linnaeus, 1758), Himantopus himantopus (Linnaeus, 1758), Recervirostra avosetta (Linnaeus, 1758), Haematopus ostralegus (Linnaeus, 1758), Numenius arquata (Linnaeus, 1758), Larus ichthyaetus (Pallas, 1773), Nyctea scandiaca (Linnaeus, 1758), Bubo bubo (Linnaeus, 1758), Lanius excubitor (Linnaeus, 1758), Parus cyanus (Pallas, 1769).

3. **"Provide an opportunity to explore and demonstrate approaches to sustainable development on a regional scale".**

(Including examples or learning experiences from putting sustainable development into practice).

The reserve territory has great potential for sustainable development of ecological tourism. In the summer season Altaisky Reserve is visited by 50-60 thousand people. The local population is actively involved in tourist and excursion activities, which provides tourists with food, accommodation, transportation services, sells souvenirs.

All residential areas located in the core zone of the biosphere reserve are equipped with solar-powered electric generators powered by wind and water. This area of work of the Altaisky Reserve aims to use renewable alternative energy sources to mitigate the effects of climate degradation by reducing the use of wood resources and carbon dioxide emissions. This project, besides the life support function for the reserve employees, has a demonstration function - showing communities of local residents from the that the use of environmentally friendly sources of electricity is possible.

4. **"Have an appropriate size to serve the three functions of biosphere reserves".**

The total reserve territory covers an area of about 3532234 hectares and has three functional areas:

- the main zone (core zone) - 25% of the entire reserve (the territory of the Altaisky State Natural Reserve, covering 881236 ha) - the protection of landscapes, ecosystems, biological species and genetic species;

- buffer zone (27% of the entire reserve, covering an area of 962800 ha) - containment of processes and phenomena that negatively affect the main zone;

- transition zone (cooperation zone) - 48% of the entire reserve territory - agricultural production and nature management lands, lands of other owners and users within the boundaries of municipal rural settlements of the Turochaksky and Ulagansky districts of the Altai Republic, the area of the cooperation zone is 1688198 hectares) - containment of processes and phenomena, negatively affecting the main and buffer zones of the reserve and contributing to the socio-economic development of the region, sustainable in environmental and socio-cultural terms.

The size of the transition zone of cooperation is sufficient to use for sustainable development and demonstration of the methods of sustainable nature management. The status of the federal specially protected natural area allows to fulfill 3 functions of the biosphere reserve in the long term.

5. **Appropriate zonation to serve the three functions**

To perform its functions, the reserve has three zones - the main (core), buffer and transition (cooperation zone).

(a) A legally established main zone or zones designated for long-term protection, in accordance with the objectives of the biosphere reserve, and of sufficient size to ensure the fulfillment of these tasks."

The main reserve zone (or the core zone), defined for the long-term protection of natural complexes, is 881236 ha or 25% of the total reserve area. The core zone is located within the Altaisky State Nature Reserve, a UNESCO World Heritage Site.

The main zone has an elongated shape and with an average width of about 35 km extends in the meridional direction for 250 km. High ridges are located along the borders of the reserve: in the north - Abakansky, reaching 2890m above sea level (Sadonskaya mountain), in the south — Chikhachev ridge (Getedei, 3021 m), in the east - Shapshalsky (Toshkalykaya mountain, 3507 m). Several isolated mountain ranges are located in the center of the reserve: Kurkure (Kurkurebazhi mountain, 3111 m), Tetykol (up to 3069 m), Chulyshmansky (Bogoyash mountain, 3143 m). From the west, the territory is limited by the valleys of the Chulyshman, Karakem rivers and Lake Teletskoye.

The core zone includes a large part of the Teletskoye Lake area (a UNESCO World Heritage Site) - 11,757 ha, which is 52% of the total lake area.

In the main zone, only long-term scientific research related to environmental monitoring is allowed. The main zone is the territory of long-term protection of federal property.

b) clearly defined buffer zones or zones surrounding or uniting the main zones (zone) in which activities aimed only at preserving biodiversity or protecting nature"

Since areas of reserves are adjacent to the eastern border of the core ("Lykov's settlement" - a cluster of the Khakassky biosphere reserve (Republic of Khakassia), "Kara-Khol" is a cluster of the biosphere reserve "Ubsunur Basin" (Republic of Tyva)). The protection zone of the Ubsunur Basin Biosphere Reserve (Republic of Tuva) adjoins the south side; therefore, the buffer zones of the Altaisky Reserve in the Altai Republic are located at the northern, western, and southwestern borders of the reserve core Cluster sections of the buffer zone: in the northern part - a 5-km zone along the boundary of the core, Lake Teletskoye water area, which is not a part of the core and in the Chulyshman River Valley, cluster sections separated by a cooperation zone in several places. Thus, the clusters of the buffer zone are distinguished: Northern, Teletsky and Chulyshmansky.

The area of the buffer zone is 962800 ha, which is 27% of the entire reserve.

Lake Teletskoye is a cluster of the «Golden Mountains of Altai » UNESCO World Cultural and Natural Heritage Site, which is confirmed by the UNESCO Certificate dated December 5, 1998, signed by the Director-General of UNESCO and Government Decree of the Altai Republic dated September 13, 1996 No. 179.

c) a transition zone (zone of cooperation) where the work in progress is aimed at the efficient use of resources"

The cooperation zone is located on the territory of 2 municipalities (Turochaksky and Ulagansky). The transition area is 1688198 hectares, which is 48% of the reserve area.

The transition area in the Turochaksky district is located within the borders of the Artybash, Iogach, Novo-Troitsk, Biikinsky rural settlements.

The transition area in the Ulagansky district is located within the boundaries of municipal rural settlements: Balykcha, Kok-Pash, Koo, Chodro.

6. **"Organizational arrangements should be provided for the involvement and participation of a suitable range of inter alia public authorities, local communities and private interests in the design and the carrying out of the functions of a biosphere reserve".**

The organizational structure of the reserve allows its employees to work on an ongoing basis (including the Department of science and development of the biosphere territory, Security (Territory Protection) Department, Department of Environmental Education and the Development of Cognitive Tourism, Resource Management Department, Accounting Department). At the same time, thanks to the scientific and technical council and other organizational institutions, the local population and individuals have the opportunity to actively participate in the implementation of basic functions. Thus, the local population is involved in the collection of primary scientific data, contributes to the protection of natural systems and supports the logistic function.

7. **Mechanisms for implementation:**

- Mechanisms to manage human use and activities
- Management policy or plan
- Authority or mechanism to implement this policy or plan
- Programmes for research, monitoring, education and training

The organizational structure of the reserve allow the reserve to fulfill all its functions entirely and at the proper level. Full technical equipment and communication facilities contribute to the quality performance of all functional duties;

There is currently no single management plan. The work is guided by the relevant plans of the departments. Thus, in the Department of science, all work is planned in accordance with the long-term 5-year research plan, annual plan and quarterly plans. Work in other departments focuses on quarterly and annual plans;

The plans developed by the reserve are used for all its activities. Prior to the adoption of the plan, the managers of the reserve and heads of departments actively discuss it. Research plans are also being discussed with community representatives and experts. Further activities of the organization are limited to the adopted plans, which must also be approved at the federal level in the office controlling the reserve;

In addition to its own research plans, the reserve considers the research plans of institutes and universities conducting their research work on its territory. These plans are also being discussed with the local population.

Monitoring of the main natural complexes and objects is based on the Environmental Monitoring Program, studies within the monitoring should be carried out at different intervals. Research programs of reserve employees are carried out separately: the study of biology, ecology of various species of mammals. The reserve constantly carries out educational activities with different categories of the population and excursions to nature.

Does the biosphere reserve have cooperative activities with other biosphere reserves (exchanges of information and staff, joint programmes, etc.)?

At the national level:

Altaisky Biosphere Reserve is a member of the Association of Nature Reserves and National Parks of the Altai-Sayan Ecoregion. This is a professional association of environmental organizations operating in the territory of Altai and Sayan. Altaisky BR takes part in the long-term interregional programs of the Association. One of the programs: Ensuring the long-term conservation of biodiversity in the Altai-Sayan Ecoregion. The goal of the program is to ensure the conservation of the biological diversity of the Altai-Sayan Ecoregion in the long term through the development of sustainable ecoregional environmental cooperation

At the regional level:

Permanent cooperation has been established with the biosphere reserves of the Altai-Sayan Ecoregion, with which the Altaisky BR has borders - the Khakassky BR and the Ubsunur Basin Biosphere Reserve. Cooperation is conducted in the field of conservation of wildlife from poachers and conducting joint scientific research.

Altaisky Biosphere Reserve cooperates with the Katunskiy Biosphere Reserve and Saylyugemsky National Park, which are located in the same region - the Altai Republic. There are signed agreements with them and joint activities are conducted to research and protect the territory.

Through twin and / or transboundary biosphere reserves:

Currently, there are no joint programs with transboundary biosphere reserves in the Altaisky Nature and Biosphere Reserve.

Within the World Network:

The Altaisky State Natural Biosphere Reserve is part of the World Network under the MAB program, and is also a part of the UNESCO Golden Mountains of Altai World Heritage Site. Since 2014, the Altaisky Biosphere Reserve has been a member of the International Alliance of Protected Areas (IAPA), within the framework of which it participates in the development and implementation of international biodiversity programmes.

Encountered obstacles, measures to be taken, and, if necessary, assistance expected from the Secretariat:

The reserve needs advice and guidance, inter alia information on current activities with examples of the successful implementation of biosphere functions in other territories.

The main objectives of the biosphere reserve:

Describe the main goals of the biosphere reserve, combining the three functions and goals of sustainable development for the coming years.

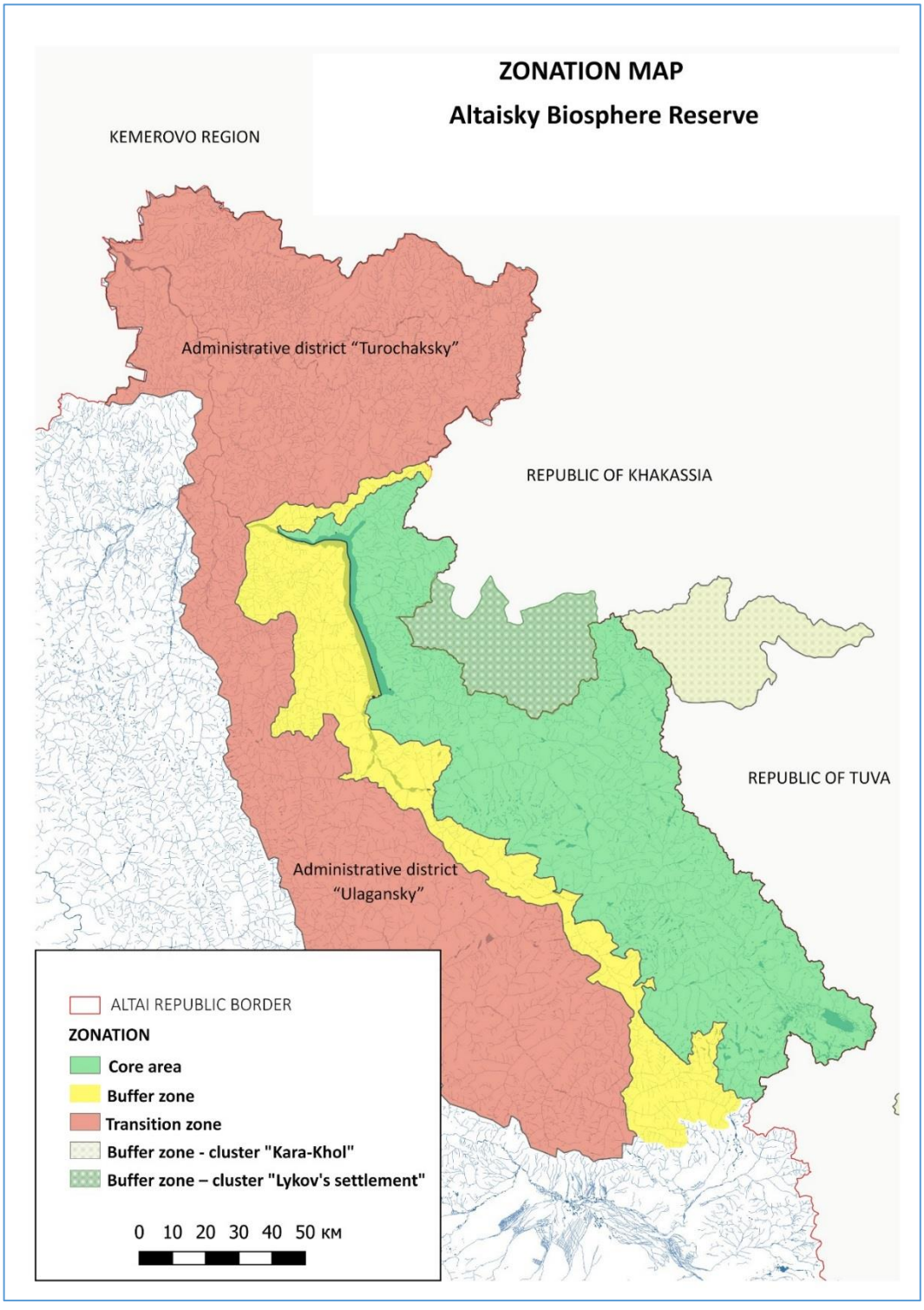
In the coming years, monitoring of natural ecosystems and objects will be intensified, the purpose of which is to develop the most suitable forms of environmental management in the . Development and improvement of environmental educational activities in order to educate the local population and strengthen the understanding of unity with the ecosystem for its long-term non-destructive existence. Development of a model for such sustainable development of ecosystems and the human community in the reserve using alternative sources of electricity and the involvement of local people in ecological tourism.

9. SUPPORTING DOCUMENTS

[List of the annexes submitted with periodic review report.]

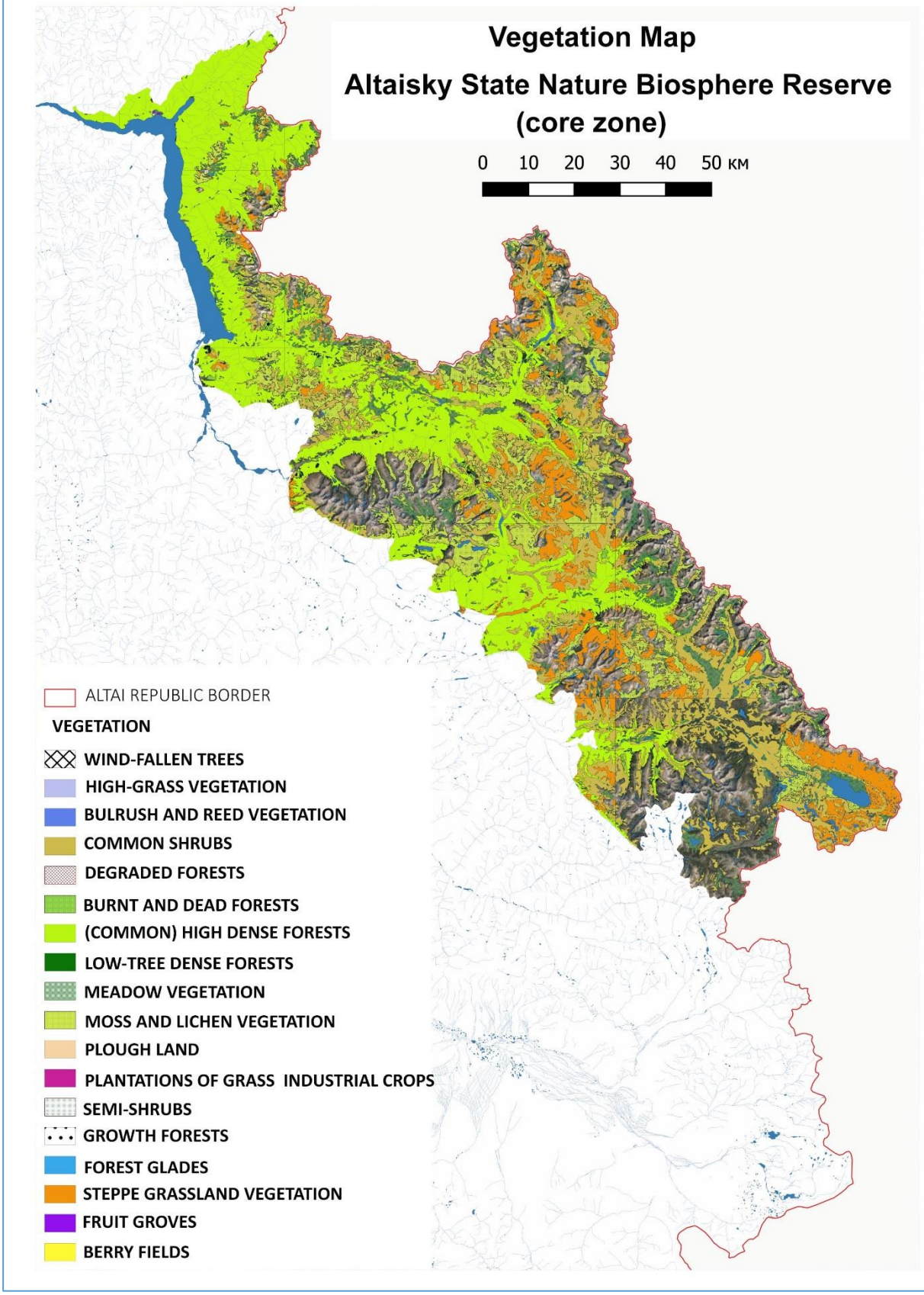
(1) Updated location and zonation map with coordinates

[Provide the biosphere reserve's standard geographical coordinates (all projected under WGS 84). Provide a map on a topographic layer of the precise location and delimitation of the three zones of the biosphere reserve (Map(s) shall be provided in both paper and electronic copies). Shapefiles (also in WGS 84 projection system) used to produce the map must also be attached to the electronic copy of the form. If applicable, also provide a link to access this map on the internet (e.g. Googlemap, website…).]



(2) **Updated vegetation map or land cover map**

[A vegetation map or land cover map showing the principal habitats and land cover types of the biosphere reserve <u>should</u> be provided, if available.]



(3) **Updated list of legal documents (if possible with English, French or Spanish synthesis of its contents and a translation of its most relevant provisions)**

[If applicable update the principal legal documents since the nomination of the biosphere reserve and provide a copy of these documents.]

- The Altaisky State Reserve was formed and operates in accordance with the Decree of the Council of People's Commissars of the RSFSR No. 391 dated 04.16.1932 “On the Establishment of the State Altaisky Reserve within the Oirot and Khakass Autonomous Regions”, and the Decision of the Council of Ministers of the RSFSR No. 764 dated 07.10.67“ On the organization of the Altaisky State Reserve.”;
- The reserve is a part of the Golden Mountains of Altai World Heritage Site, which is confirmed by the UNESCO Certificate dated December 5, 1998, signed by the Director-General of UNESCO, and the Resolution of the Government of the Altai Republic dated September 13, 1996 No. 179.
- Federal Law dated March 14, 1995 N 33-FZ (as amended on July 26, 2019) "On Specially Protected Natural Areas"
- The Charter of the Federal State Budgetary Institution "Altaisky State Natural Biosphere Reserve", approved by order of the Ministry of Natural Resources and Environment of the Russian Federation No. 64 dated 01/31/2019.
- Regulations on the federal state institution "Altaisky State Nature Reserve", approved by order of the Order of the Ministry of Natural Resources of Russia dated January 23, 2006 N 8 (as amended by Orders of the Ministry of Natural Resources of the Russian Federation dated February 27, 2009 No. 48, dated March 26, 2009 No. 71)
- The order of the Federal Service for Supervision of Natural Resources No. 184-hp dated 05/15/2007. "On the appointment of Kalmykov I.V." On the appointment of the director of the Altaisky State Reserve.

There are no copies of these documents translated into English.

(4) **Updated list of land use and management/cooperation plans**

[List existing land use and management/cooperation plans (with dates and reference numbers) for the administrative area(s) included within the biosphere reserve. Provide a copy of these documents. It is recommended to produce an English, French or Spanish synthesis of its contents and a translation of its most relevant provisions.]

The territory of the Altaisky State Reserve	Core area	In accordance with paragraph 13 of the Charter of the Federal State Budgetary Institution "Altaisky State Natural Biosphere Reserve", approved by the order of the Ministry of Natural Resources and Environment of the Russian Federation No. 64 dated 01/31/2019. land plots (including land plots whith forests on them) within the boundaries of the reserve are provided to the Institution for permanent (unlimited) use

The cluster of the reserve - Federal State Budgetary Institution "State Natural Biosphere Reserve" Khakassky "	Buffer zone - cluster "Lykov's settlement"	Provided to the Khakassky Reserve for permanent (unlimited) use
Federal State Budgetary Institution "State Natural Biosphere Reserve"Ubsnuur Basin"	Buffer zone - cluster "Kara-Khol"	Provided to the Ubsu-Nur Basin Reserve for permanent (unlimited) use
Administrative district “Ulagansky”	transition zone	Law of the Altai Republic dated November 10, 2008 N 101-P3 “On the administrative-territorial structure of the Altai Republic”
Administrative district “Turochaksky”	transition zone	Law of the Altai Republic dated November 10, 2008 N 101-P3 “On the administrative-territorial structure of the Altai Republic”

(5) **Updated species list (to be annexed)**
[Provide a list of important species occurring within the proposed biosphere reserve, including common names, wherever possible.]
Annex 4

(6) **Updated list of main bibliographic references (to be annexed)**
[Provide a list of the main publications and articles of relevance to the proposed biosphere reserve.]
Annex 5

(7) **Further supporting documents.**

10. ADRESSES

10.1 **Contact address of the proposed biosphere reserve:**
[Government agency, organization, or other entity (entities) to serve as the main contact to whom all correspondence within the World Network of Biosphere Reserves should be addressed.]

Name: Altaisky State Nature Biosphere Reserve
Street or P.O. Box: 1, Naberezhny lane
City with postal code: 649000 Altai republic, Gorno-Altaisk city
Country: Russian Federation
Telephone: 007 (38822) 21419
E-mail: agpzmain@mail.ru
Web site: www.altzapoved.ru
All the administrating entities are situated at the above mentionned address

Annex I to the Biosphere Reserve Periodic Review, January 2013

MABnet Directory of Biosphere Reserves

Administrative details

Country: Russian Federation
Name of BR: Biosphere reserve «Altaisky»
Year designated: 2009
Administrative authorities: (7.6)
Name Contact: (10.1)
Contact address: *(Including phone number, postal and email adresses)* (10.1)
E-mail: agpzmain@mail.ru
Related links: *(web sites)* http://www.altzapoved.ru/
Social networks: (6.5.4)

Description

General description:

The biosphere reserve Altaisky is located on the area of the North-Western and Western Altai and occupies western part of the Teletskoye Lake basin. Plateaus and alpine ridges of the Chulyshmansky highland occupy the greater part of its territory. Average absolute altitude of mountains here makes 1900m., and the maximum point is 3148m. The ranges Torot (till 1615 m) and Korbu (2058 m) are located in the northern part of the reserve. The reserve ridges Abakansky (2841 m) and Shapshalsky (3507 m) are located along eastern borders. Southern border of the reserve is the Chikhacheva ridge (3053 m). Deep valley of the river Chulyshman and Teletskoye Lake stretches along western border of the reserve. At the southern part there is the vast Dzhulukulskaya intermountain Kotlovina with absolute height approximately 2200m. The characteristic feature of the landscapes of the reserve area is abundance of lakes - 2560 middle and small lakes, including the lakes of glacier origin- about 1200. There are swampy areas found in intermountain depressions, river valleys and in smooth slopes. The mountain taiga forests consisting of cedar-tree (Pinus sibirica), larch (Larix sibirica), silver-firtree (Abies sibirica), fir (Picea obovata), birch (Betula pendula), and aspen tree (Populus tremula) occupy almost the half of the reserve area. The pride of the reserve is cedar-tree massifs, a cedar-tree can reach 1,8 m in diameter and be over 400-450 years old. The Altaisky reserve Since 1998 - a UNESCO World Heritage Site, and Teletskoye Lake is also known as the “little Baikal” of Western Siberia. Part of the Teletskoe Lake basin (11757 ha) is included in the core of the Altaisky reserve. Altaisky biosphere reserve includes 4 important bird areas, of international value according to the program «Important Bird Areas». Currently, conservation and monitoring activities of the Altaisky biosphere reserve are based on the Environmental Monitoring program. The local residents of Altaisky biosphere reserve are involved in development of the area management plan by various organizational procedures.

Major ecosystem type: terrestrial
Major habitats & land cover types: The territory of the Altaisky Reserve includes five physico-geographical areas of three natural provinces. Almost all natural zones of the Altai Mountains are distinguished in the spectrum of altitudinal zonation: taiga low mountains and mid mountains, subalpine and alpine meadow middle mountains and high mountains, tundra-steppe high mountains, tundra middle mountains and high mountains, glacial-nival high mountains.

Bioclimatic zone: The area of the proposed biosphere reserve relates to a bio-geographical region of the Altai-Sayan mountain country. According to classification of bio-geographical

provinces of the Udvardy Paleoarctics, the reserve is located in the taiga biome of the South-Siberian (mountain-taiga) province, in the closest neighborhood with the Ubsu-Nur Lake province. The junction of provinces and inter-zonation, and complicated geological history of the region are the causes of natural features combination, characteristic to various biomes. Being different by high biological diversity, the reserve is distinguished into an independent geobotanical and floristic region of the Altai Republic - the Altaisky nature reserve.

Location (latitude & longitude):

	Center	North	East	South	West
latitude	51º59'	51º57'05,8´´	50º28´42,1´´	50º 16'14,2´´	51º43'11,2´´
longitude	88º42'	87º58'13,8´´	89º51´47,3´´	89º 21'21,6´´	86 º59'55,7´´

Total Area (ha): 2953325
Core area*(s):* Size of terrestrial Core Area: 881236 ha;
Buffer zone*(s):* Size of terrestrial Buffer Zone: 383891 ha;
Transition area*(s):* Approx. size of terrestrial Transition Area: 1688198 ha;
Different existing zonation:
Altitudinal range *(*metres above sea level): 434 m (level of the Teletskoye Lake according to water cut), 3507m (Tashkalykaya Mt., the Shapshalsky ridge)

Zonation map(s) (refer to section 2.2.2):

Main objectives of the biosphere reserve

Brief description

Altaisky State Nature Biosphere reserve as a regional center that forwards the spread of ideas concerning the sustainable use of natural resources among different social groups by means of the cooperation with the government institutions and non-governmental organizations. The Nature Reserve aims to become the leading eco-educational, research and coordination center in the sphere of preservation of natural heritage and biodiversity with the integration of its activity into the region's social and economic structure.

Research

Brief description

The Reserve conducts multiannual research programmes:
- the research of the population biology, phenology and regular registration of the dynamics of invertebrate and vertebrate animals' population;
- the control of the state of population of rare animal and plant species within the territory of the reserve;
- the control of the dynamics of the ecological complexes' succession.

Monitoring

Brief description

Altaisky Biosphere reserve carries out the following types of long-term monitoring: hydrometeorological monitoring, monitoring of the number of mammal species, amphibians and reptiles. Monitoring of phytocenotic dynamics and monitoring of invasive flora. Monitoring of the state of natural complexes on the eco-educational routes of the reserve.

Specific variables (fill in the table below and tick the relevant parameters)

Abiotic		Biodiversity	
Abiotic factors	+	Afforestation/Reforestation	
Acidic deposition/Atmospheric factors	+	Algae	+
Air quality		Alien and/or invasive species	+
Air temperature	+	Amphibians	+
Climate, climatology	+	Arid and semi-arid systems	
Contaminants		Autoecology	+
Drought		Beach/soft bottom systems	
Erosion		Benthos	+
Geology	+	Biodiversity aspects	+
Geomorphology	+	Biogeography	+
Geophysics	+	Biology	+
Glaciology		Biotechnology	
Global change		Birds	+
Groundwater		Boreal forest systems	+
Habitat issues	+	Breeding	
Heavy metals		Coastal/marine systems	
Hydrology	+	Community studies	+
Indicators		Conservation	+
Meteorology	+	Coral reefs	
Modeling		Degraded areas	
Monitoring/methodologies	+	Desertification	
Nutrients		Dune systems	
Physical oceanography		Ecology	+
Pollution, pollutants		Ecosystem assessment	+
Siltation/sedimentation		Ecosystem functioning/structure	+
Soil	+	Ecosystem services	
Speleology		Ecotones	+
Topography		Endemic species	+
Toxicology		Ethology	+
UV radiation	+	Evapotranspiration	
		Evolutionary studies/Palaeoecology	
		Fauna	+
		Fires/fire ecology	+
		Fishes	+
		Flora	+
		Forest systems	+
		Freshwater systems	+
		Fungi	+
		Genetic resources	+
		Genetically modified organisms	
		Home gardens	+
		Indicators	
		Invertebrates	+
		Island systems/studies	
		Lagoon systems	
		Lichens	+
		Mammals	+
		Mangrove systems	
		Mediterranean type systems	
		Microorganisms	+

		Migrating populations	+
		Modeling	
		Monitoring/methodologies	+
		Mountain and highland systems	+
		Natural and other resources	+
		Natural medicinal products	
		Perturbations and resilience	
		Pests/Diseases	
		Phenology	+
		Phytosociology/Succession	
		Plankton	+
		Plants	+
		Polar systems	
		Pollination	
		Population genetics/dynamics	+
		Productivity	+
		Rare/Endangered species	+
		Reptiles	+
		Restoration/Rehabilitation	
		Species (re) introduction	+
		Species inventorying	+
		Sub-tropical and temperate rainforest	
		Taxonomy	
		Temperate forest systems	
		Temperate grassland systems	
		Tropical dry forest systems	
		Tropical grassland and savannah systems	
		Tropical humid forest systems	
		Tundra systems	+
		Vegetation studies	+
		Volcanic/Geothermal systems	
		Wetland systems	+
		Wildlife	+

		Integrated monitoring	
Agriculture/Other production systems		Biogeochemical studies	
Agroforestry		Carrying capacity	
Anthropological studies		Climate change	+
Aquaculture		Conflict analysis/resolution	
Archaeology	+	Ecosystem approach	+
Bioprospecting		Education and public awareness	+
Capacity building		Environmental changes	+
Cottage (home-based) industry		Geographic Information System (GIS)	+
Cultural aspects	+	Impact and risk studies	
Demography		Indicators	+
Economic studies		Indicators of environmental quality	+
Economically important species	+	Infrastructure development	+
Energy production systems		Institutional and legal aspects	
Ethnology/traditional practices/knowledge	+	Integrated studies	+
Firewood cutting		Interdisciplinary studies	+
Fishery		Land tenure	
Forestry		Land use/Land cover	
Human health		Landscape inventorying/monitoring	+
Human migration		Management issues	+
Hunting		Mapping	+
Indicators	+	Modeling	
Indicators of sustainability	+	Monitoring/methodologies	+
Indigenous people's issues	+	Planning and zoning measures	+
Industry		Policy issues	
Livelihood measures		Remote sensing	
Livestock and related impacts	+	Rural systems	+
Local participation	+	Sustainable development/use	+
Micro-credits	+	Transboundary issues/measures	
Mining		Urban systems	
Modeling		Watershed studies/monitoring	
Monitoring/methodologies	+		
Natural hazards			
Non-timber forest products			
Pastoralism			
People-Nature relations	+		
Poverty			
Quality economies/marketing			
Recreation	+		
Resource use			
Role of women	+		
Sacred sites			
Small business initiatives	+		
Social/Socio-economic aspects	+		
Stakeholders' interests	+		
Tourism	+		
Transports	+		

Annex II to the Biosphere Reserve Periodic Review, January 2013
Promotion and Communication Materials
for the biosphere reserve

Provide some promotional material regarding the site, notably high quality photos, and/or short videos on the site so as to allow the Secretariat to prepare appropriate files for press events. To this end, a selection of photographs in high resolution (300 dpi), with photo credits and captions and video footage (rushes), without any comments or sub-titles, of professional quality – DV CAM or BETA only, will be needed.

In addition, return a signed copy of the following Agreements on Non-Exclusive Rights for photo(s) and video(s).

United Nations Educational, Scientific and Cultural Organization
Organisation des Nations Unies pour l'éducation, la science et la culture
Organización de las Naciones Unidas para la Educación, la Ciencia y la Cultura
Организация Объединенных Наций по вопросам образования, науки и культуры
منظمة الأمم المتحدة للتربية والعلم والثقافة
联合国教育、科学及文化组织

UNESCO Photo Library

Bureau of Public Information

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   b) These rights are granted to UNESCO for the legal term of copyright throughout the world.

   c) The name of the photographer will be cited alongside UNESCO's whenever his/her work is used in any form.

2. I certify that:

   a) I am the sole copyright holder of the photo(s) and am the owner of the rights granted by virtue of this agreement and other rights conferred to me by national legislation and pertinent international conventions on copyright and that I have full rights to enter into this agreement.

   b) The photo(s) is/are in no way whatever a violation or an infringement of any existing copyright or licence, and contain(s) nothing obscene, libellous or defamatory.

Name and Address:

Federal State Budgetary Institution

"Altaisky State Nature Biosphere Reserve"

649000 Russian Federation, Altai republic, Gorno-Altaysk city, Naberezhny lane, 1

Signature : Date :

(Sign, return to UNESCO two copies of the Agreement and retain the original for yourself)

Mailing address: 7 Place Fontenoy, 75352 Paris 07 SP, Direct Telephone: 00331 – 45681687

Direct Fax: 00331 – 45685655; e-mail: photobank@unesco.org; m.ravassard@unesco.org

United Nations Educational, Scientific and Cultural Organization
Organisation des Nations Unies pour l'éducation, la science et la culture
Organización de las Naciones Unidas para la Educación, la Ciencia y la Cultura
Организация Объединенных Наций по вопросам образования, науки и культуры
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   c) The name of the author/copyright holder will be cited alongside UNESCO's whenever his/her work is used in any form.

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   b) The video(s) is/are in no way whatever a violation or an infringement of any existing copyright or licence, and contain(s) nothing obscene, libellous or defamatory.

Name and Address:

Federal State Budgetary Institution

"Altaisky State Nature Biosphere Reserve"

649000 Russian Federation, Altai republic, Gorno-Altaysk city, Naberezhny lane, 1

Signature : Date:

Annex III to the Biosphere Reserve Periodic Review, January 2013

The Statutory Framework of the World Network of Biosphere Reserves

Introduction

Within UNESCO's Man and the Biosphere (MAB) programme, biosphere reserves are established to promote and demonstrate a balanced relationship between humans and the biosphere. Biosphere reserves are designated by the International Co-ordinating Council of the MAB Programme, at the request of the State concerned. Biosphere reserves, each of which remains under the sole sovereignty of the State where it is situated and thereby submitted to State legislation only, form a World Network in which participation by the States is voluntary.

The present Statutory Framework of the World Network of Biosphere Reserves has been formulated with the objectives of enhancing the effectiveness of individual biosphere reserves and strengthening common understanding, communication and co-operation at regional and international levels.

This Statutory Framework is intended to contribute to the widespread recognition of biosphere reserves and to encourage and promote good working examples. The delisting procedure foreseen should be considered as an exception to this basically positive approach, and should be applied only after careful examination, paying due respect to the cultural and socio-economic situation of the country, and after consulting the government concerned.

The text provides for the designation, support and promotion of biosphere reserves, while taking account of the diversity of national and local situations. States are encouraged to elaborate and implement national criteria for biosphere reserves which take into account the special conditions of the State concerned.

Article 1 - Definition

Biosphere reserves are areas of terrestrial and coastal/marine ecosystems or a combination thereof, which are internationally recognized within the framework of UNESCO's programme on Man and the Biosphere (MAB), in accordance with the present Statutory Framework.

Article 2 - World Network of Biosphere Reserves

1. Biosphere reserves form a worldwide network, known as the World Network of Biosphere Reserves, hereafter called the Network.

2. The Network constitutes a tool for the conservation of biological diversity and the sustainable use of its components, thus contributing to the objectives of the Convention on Biological Diversity and other pertinent conventions and instruments.

3. Individual biosphere reserves remain under the sovereign jurisdiction of the States where they are situated. Under the present Statutory Framework, States take the measures which they deem necessary according to their national legislation.

Article 3 - Functions

In combining the three functions below, biosphere reserves should strive to be sites of excellence to explore and demonstrate approaches to conservation and sustainable development on a regional scale:

(i) conservation - contribute to the conservation of landscapes, ecosystems, species and genetic variation;

(ii) development - foster economic and human development which is socio-culturally and ecologically sustainable;

(iii) logistic support - support for demonstration projects, environmental education and training, research and monitoring related to local, regional, national and global issues of conservation and sustainable development.

Article 4 - Criteria

General criteria for an area to be qualified for designation as a biosphere reserve:

1. It should encompass a mosaic of ecological systems representative of major biogeographic regions, including a gradation of human interventions.

2. It should be of significance for biological diversity conservation.

3. It should provide an opportunity to explore and demonstrate approaches to sustainable development on a regional scale.

4. It should have an appropriate size to serve the three functions of biosphere reserves, as set out in Article 3.

5. It should include these functions, through appropriate zonation, recognizing:

(a) a legally constituted core area or areas devoted to long-term protection, according to the conservation objectives of the biosphere reserve, and of sufficient size to meet these objectives;

(b) a buffer zone or zones clearly identified and surrounding or contiguous to the core area or areas, where only activities compatible with the conservation objectives can take place;

(c) an outer transition area where sustainable resource management practices are promoted and developed.

6. Organizational arrangements should be provided for the involvement and participation of a suitable range of inter alia public authorities, local communities and private interests in the design and carrying out the functions of a biosphere reserve.

7. In addition, provisions should be made for:

(a) mechanisms to manage human use and activities in the buffer zone or zones;

(b) a management policy or plan for the area as a biosphere reserve;

(c) a designated authority or mechanism to implement this policy or plan;

(d) programmes for research, monitoring, education and training.

Article 5 - Designation procedure

1. Biosphere reserves are designated for inclusion in the Network by the International Co-ordinating Council (ICC) of the MAB programme in accordance with the following procedure:

(a) States, through National MAB Committees where appropriate, forward nominations with supporting documentation to the secretariat after having reviewed potential sites, taking into account the criteria as defined in Article 4;

(b) the secretariat verifies the content and supporting documentation: in the case of incomplete nomination, the secretariat requests the missing information from the nominating State;

(c) nominations will be considered by the Advisory Committee for Biosphere Reserves for recommendation to ICC;

(d) ICC of the MAB programme takes a decision on nominations for designation. The Director-General of UNESCO notifies the State concerned of the decision of ICC.

2. States are encouraged to examine and improve the adequacy of any existing biosphere reserve, and to propose extension as appropriate, to enable it to function fully within the Network. Proposals for extension follow the same procedure as described above for new designations.

3. Biosphere reserves which have been designated before the adoption of the present Statutory Framework are considered to be already part of the Network. The provisions of the Statutory Framework therefore apply to them.

Article 6 - Publicity

1. The designation of an area as a biosphere reserve should be given appropriate publicity by the State and authorities concerned, including commemorative plaques and dissemination of information material.

2. Biosphere reserves within the Network, as well as the objectives, should be given appropriate and continuing promotion.

Article 7 - Participation in the Network

1. States participate in or facilitate co-operative activities of the Network, including scientific research and monitoring, at the global, regional and sub-regional levels.

2. The appropriate authorities should make available the results of research, associated publications and other data, taking into account intellectual property rights, in order to ensure the proper functioning of the Network and maximize the benefits from information exchanges.

3. States and appropriate authorities should promote environmental education and training, as well as the development of human resources, in co-operation with other biosphere reserves in the Network.

Article 8 - Regional and thematic subnetworks

States should encourage the constitution and co-operative operation of regional and/or thematic subnetworks of biosphere reserves, and promote development of information exchanges, including electronic information, within the framework of these subnetworks.

Article 9 - Periodic review

1. The status of each biosphere reserve should be subject to a periodic review every ten years, based on a report prepared by the concerned authority, on the basis of the criteria of Article 4, and forwarded to the secretariat by the State concerned.

2. The report will be considered by the Advisory Committee for Biosphere Reserves for recommendation to ICC.

3. ICC will examine the periodic reports from States concerned.

4. If ICC considers that the status or management of the biosphere reserve is satisfactory, or has improved since designation or the last review, this will be formally recognized by ICC.

5. If ICC considers that the biosphere reserve no longer satisfies the criteria contained in Article 4, it may recommend that the State concerned take measures to ensure conformity with the provisions of Article 4, taking into account the cultural and socio-economic context of the State concerned. ICC indicates to the secretariat actions that it should take to assist the State concerned in the implementation of such measures.

6. Should ICC find that the biosphere reserve in question still does not satisfy the criteria contained in Article 4, within a reasonable period, the area will no longer be referred to as a biosphere reserve which is part of the Network.

7. The Director-General of UNESCO notifies the State concerned of the decision of ICC.

8. Should a State wish to remove a biosphere reserve under its jurisdiction from the Network, it notifies the secretariat. This notification shall be transmitted to ICC for information. The area will then no longer be referred to as a biosphere reserve which is part of the Network.

Article 10 - Secretariat

1. UNESCO shall act as the secretariat of the Network and be responsible for its functioning and promotion. The secretariat shall facilitate communication and interaction among individual biosphere reserves and among experts. UNESCO shall also develop and maintain a worldwide accessible information system on biosphere reserves, to be linked to other relevant initiatives.

2. In order to reinforce individual biosphere reserves and the functioning of the Network and sub-networks, UNESCO shall seek financial support from bilateral and multilateral sources.

3. The list of biosphere reserves forming part of the Network, their objectives and descriptive details, shall be updated, published and distributed by the secretariat periodically.

Annex IV to the Biosphere Reserve Periodic Review, January 2013

List of species of the Altaisky State Biosphere reserve plants and animals having special importance for their conservation and development

RARE AND PROTECTED SPECIES – РЕДКИЕ И ОХРАНЯЕМЫЕ ВИДЫ

*Red List of Altai repiblik (2017)

** Red List of Russia

***Red List of the International Union for Conservation of Nature (IUCN)

СОСУДИСТЫЕ РАСТЕНИЯ – VASCULAR PLANTS

Семейство Бобовые – Fabaceae

*Астрагал ложноюжный – (Astragalus pseudoaustralis Fisch. et Mey.)
*Астрагал Политова – (Astragalus politovii Kryl.)
*Астрагал пушистый – (Astragalus puberulus Ledeb.)
*Астрагал чуйский – (Astragalus tschuensis Bunge.)
**Остролодочник вздутоплодный – (Oxytropis physocarpa Ledeb.)
**Остролодочник чуйский – (Oxytropis tschujae Bunge.)

Семейство Волчниковые –Thymelaeaceae

*Волчник обыкновенный – (Daphne mezereum L.)

Семейство Злаки – Poaceae

*Ковыль Залесского – (Stipa zalesskii Wilensky s. l.)
**Ковыль перистый – (Stipa pennata L.)
**Коротконожка лесная – (Brachypodium sylvaticum (Huds.) Beauv.)
*Овсяница лесная, высочайшая – (Festuca altissima All.), (F. sylvatica (Poll.) Vill.)

Семейство Сельдерейные, или Зонтичные – Apiaceae

**Володушка Мартьянова – (Bupleurum martjanovii Kryl.(Umbelliferae)
*Осмориза остистая (О. амурская) – (Osmorhiza aristata (Thunb.) Rydb.)
(O. amurensis Fr. Schmidt ex Maxim.)
*Подлесник уральский – (Sanicula uralensis Kleop. ex R. Kam., Czubarov et Schmakov (S. giraldii auct. non H. Wolff.)

Семейство Кирказоновые – Aristolochiaceae

*Копытень европейский – (Asarum europaeum L.)

Семейство Крестоцветные – Brassicaceae

**Зубянка сибирская – (Dentaria sibirica (O.E. Schulz) N. Busch)
(Cardamine glanduligera O. Schwarz)
*Шильник водяной – (Subularia aquatica L.)
*Одногнездка обернутая (Брайя обернутая) – (Aphragmus involucratus (Bunge) O.E. Schulz (Braya involucrata (Bunge) Ledeb.)
*Шильник водяной – (Subularia aquatica L.)

Семейство Лилейные – Liliaceae

*Гусятник алтайский – (Gagea altaica Schischk. et Sumn.)
**Кандык сибирский – (Erythronium sibiricum (Fisch. et Mey.) Kryl.)

Семейство Луковые – Alliaceae

*Лук алтайский – Allium altaicum Pall. (*A. fistulosum* auct. non L.)
*Лук алтынкольский – (Allium altyncolicum Friesen)
(A. ledebourianum var. intermedium Kryl., A. schoenoprasum var. sibiricum auct. non Garcke)

*Лук мелкоголовый– (Allium tytthocephalum Schult. et Schult. f.)

Семейство Лютиковые (Ranunculaceae)

**Борец ненайденный – (Aconitum decipiens Worosch. et Anfalov
(*A. curvirostre* (Kryl.) Serg.).

**Борец Паско – (Aconitum paskoi Worosch.)

*Воронец колосистый – (Actaea spicata L.)

*Живокость укокская – (Delphinium ukokense Serg.)

*Стародубка весенняя, горицвет весенний – (Adonis vernalis L.)

Семейство Мареновые – Rubiaceae

*Подмаренник трехцветковый – (Galium triflorum Michx.)

*Подмаренник удивительный – (Galium paradoxum Maxim.)

Семейство Гречишные – Polygonaceae

**Ревень алтайский – (Rheum altaicum Losinsk. (Rh. compactum L. var. altaicum (Losinsk.) Czerepn.)

Семейство Орхидные – Orchidaceae

Венерин башмачок вздутоцветковый – **(Cypripedium ventricosum Sw.)

**Венерин башмачок крупноцветковый –(Cypripedium macranthon Sw.)

**Венерин башмачок настоящий – (Cypripedium calceolus L.)

*Башмачок пятнистый – (Cypripedium guttatum Sw.)

**Гнездоцветка клобучковая – (Neottianthe cucullata (L.) Schlecht.)

*Дремлик болотный – (Epipactis palustris (L.) Crantz)

*Дремлик зимовниковый – (Epipactis helleborine (L.) Crantz
(E. latifolia (L.) All.)

**Лосняк Лёзеля – (Liparis loeselii (L.) Rich.)

*Любка двулистная – (Platanthera bifolia (L.) Rich.)

**Надбородник безлистный – (Epipogium aphyllum (F.W. Schmidt) Sw.)

**Пальцекорник балтийский – (Dactylorhiza baltica (Klinge) Orlova (Orchis baltica Klinge; Dactylorchis longifolia (L. Neumann) Verm)

*Пальцекорник Фукса – (Dactylorhiza fuchsii (Druce) Soo
(Orchis fuchsii Druce)

*Тулотис буреющий – (Tulotis fuscescens (L.) Czer.
(Perularia fuscescens (L.) Lindl.)

**Ятрышник шлемоносный – (Orchis militaris L.)

Семейство Розоцветные – Rosaceae

*Лапчатка Крылова – (Potentilla kryloviana Th. Wolf)

Семейство Сложноцветные – Asteraceae

**Дендрантема выемчатолистная – (Dendranthema sinuatum (Ledeb.) Tzvel.)

*Горькуша (соссюрея) ледниковая – (Saussurea glacialis Herd.)

*Горькуша (соссюрея) оргаадай – (Saussurea orgaadayi
V. Khan. et Krasnob.)

*Левзея, маралий корень – (Stemmacantha carthamoides
(Willd.) M. Dittrich (Leuzea carthamoides (Willd.) DC., Rhaponticum carthamoides (Willd.) Iljin)

Семейство Толстянковые – Crassulaceae

*Родиола морозная – (Rhodiola algida (Ledeb.) Fisch. et C. A. Mey.
(Sedum algidum Ledeb.)

**Родиола розовая, золотой корень – (Rhodiola rosea L. (Sedum roseum L.)

*Родиола почтиперистая – (Rhodiola subpinnata (Krasnob.) Krasnob.
(R. pinnatifida A. Boriss. subsp. subpinnata Krasnob., R. krylovii Polozhij et Revjak.)

*Родиола четырехнадрезная, четырехчленная – (Rhodiola quadrifida (Pall.) Fisch. et Mey.
(Sedum quadrifidum Pall.)

*Родиола ярко-красная – (Rhodiola coccinea (Royle) Boriss.)

ПАПОРОТНИКОВИДНЫЕ - POLYPODIOPHYTA

Семейство Костенцовые – Aspleniaceae

**Костенец пекинский, алтайский – (Asplenium pekinense Hance
(A. altajense (Kom.) Grub., A. sarelii Hook. var. altajense Kom.)

*Костенец волосовидный – (Asplenium trichomanes L.)

Семейство Многоножковые – Polypodiaceae

*Лепизорус линейный, Альберта – (Lepisorus albertii (Regel) Ching
Pleopeltis clathrata (Clarke) Czer.; Lepisorus clathratus (Clarke) Ching)

Семейство Ужовниковые – Ophioglossaceae

*Гроздовник многораздельный – (Botrychium multifidum(S.G. Gmel.) Rupr.)

ПЛАУНОВИДНЫЕ - LICOPODIOPHYTA

Семейство Полушниковые – Isoëtaceae

*Полушник озерный – (Isoëtes lacustris L.)

ОТДЕЛ МОХОВИДНЫЕ – BRYOPHYTA

Сем. Амблистегиевые – (Amblystegiaceae)

1. ** Кампилиум Крылова – (Campylium krylovii)

Сем. Туидиевые – (Thuidiaceae)

2. ** Лептоптеригинандрум южно-альпийский – (Leptopterigynandrum austro-alpninum).

НИЗШИЕ РАСТЕНИЯ

ГРИБЫ – FUNGI

Сем. Полипоровые – (Polyporaceae)

1. * Пилолистник ароматнейший – (Neofavolus suavissimus)

Сем. Сыроежковые – (Russulaceae)

2. * Млечник древесный – (Lactarius lignyotus Fr.)
3. * Млечник альпийский – (Lactarius alpinus)

Сем. Негниючниковые – (Marasmiaceae)

4. * Гидропус чернильный – (Hydropus atramentosus)

Сем. Агариковые – (Agaricaceae)

5. * Меланофиллюм кроваво-красный – (Melanophyllum haematospermum)

Сем. Гериciевые – (Hericiaceae)

6. * Гериций коралловидный – (Hericium coralloides)

Сем. Миценовые – (Mycenaceae)

7. * Мицена орегонская – (Mycena oregonensis).

ЛИШАЙНИКИ – LICHENES

Сем. Лобариевые – (Lobariaceae)

1. ** Лобария легочная – (Lobaria pulmonaria)
2. ** Лобария сетчатая – (Lobaria retigera)
3. ** Стикта окаймленная – (Sticta limbata).

ВОДОРОСЛИ - ALGAE

Отдел Диатомовые водоросли – (Bacillariophyta)

Сем. Паралиевые – (Paraliaceae Crawford)

1.**Эллербекия песчанная – (Ellerbeckia arenaria).

КЛАСС МЛЕКОПИТАЮЩИЕ – MAMMALIA

Отряд Рукокрылые – Chiroptera

Семейство Гладконосых летучих мышей – Vespertilionidae, Род Ночницы — Myotis

*Водяная ночница – (Myotis daubentoni)

*Ночница Брандта – (Myotis brandti)

*Ночница Иконникова – (Myotis ikonnikovi)

*Бурый ушан – (Plecotus auritus)
*Рыжая вечерница – (Nyctalus noctula)
*Северный кожанок – (Eptesicus nilssoni)
*Прудовая ночница – (Myotis dasycneme)
*Большой трубконос – (Murina leucogaster)
Отряд Хищные – Carnivora
Семейство Куниц – (Mustelidae)
Род Речные выдры – (Lutra)
*Выдра – (Lutra lutra)
Семейство Кошек – (Felidae)
Род Пантеры – (Panthera)
**Снежный барс – (Panthera uncia)
Отряд Парнокопытные – Artyodactyla
Семейство Кабарог – (Moschidae)
Род Кабарги – (Moschus)
***Сибирская кабарга – (Moschus moschiferus)
Род Северные олени – (Rangifer)
Северный олень – (Rangifer tarandus)
Семейство Полорогих – (Bovidae)
Род Бараны – (Ovis)
**Горный баран – (Ovis ammon)

КЛАСС ПТИЦЫ - AVES
Отряд ГАГАРООБРАЗНЫЕ – GAVIIFORMES
Сем. Гагаровые – (Gaviidae)
**Чернозобая гагара – (Gavia arctica)
Отряд ПОГАНКООБРАЗНЫЕ - PODICIPEDIFORMES
Сем. Поганковые –(Podicipitidae)
**Черношейная поганка – (Podiceps nigricollis)
Отряд ВЕСЛОНОГИЕ – PELECANIFORMES
Сем. Пеликановые – (Pelecanidae)
*Розовый пеликан – (Pelekanus onocrotalus).
*Кудрявый пеликан – (P. crispus).
Сем. Баклановые – (Phlacrocoracidae)
**Большой баклан – (Phalacrocorax carbo)
Отряд АИСТОБРАЗНЫЕ – CICONIIFORMES
Сем. Цаплевые – (Ardeidae)
** Большая выпь – (Botaurus stellaris)
**Серая цапля – (Ardea cinerea)
Сем. Ибисовые – (Thresciornithidae)
* Колпица – (Platalea leucorodia)
Сем. Аистовые – (Ciconidae)
* Черный аист – (Ciconia nigra)
Отряд ФЛАМИНГООБРАЗНЫЕ - PHOENICOPTERIFORMES
Сем. Фламинговые – (Phoenicopteridae)
*Обыкновенный фламинго – (Phoenicopterus roseus)
Отряд ГУСЕОБРАЗНЫЕ – ANSERIFORMES
Сем. Утиные - Anatidae
* Черная казарка – (Branta bernicla)
* Краснозобая казарка – (Rufibrenta ruficollis).

**Таежный гуменник – (Anser fabalis middendorffii)
*Горный гусь – (Anser indicus)
*Сухонос – (Cygnopsis cygnoides)
**Лебедь-кликун – (Cygnus cygnus)
* Малый лебедь – (Cygnus bewickii)
* Клоктун – (Anas formosa)
*Белоглазая чернеть – (Aythya nyroca)
**Горбоносый турпан – (Melanitta deglandi)
** Луток – (Mergus albellus)
**Длинноносый крохаль – (Mergus serrator)

Отряд СОКОЛООБРАЗНЫЕ - FALCONIFORMES

Сем. Скопиные - Pandionidae
*Скопа – (Pandion haliaetus)

Сем. Ястребиные – (Acipitridae)
** Хохлатый осоед – (Pernis ptilorhyncus)
* Степной лунь – (Circus macrourus)
** Мохноногий курганник – (Buteo hemilasius)
** Орел-карлик – (Hieraaetus pennatus)
* Степной орел – (Aquila rapax)
* Большой подорлик – (Aquila clanga)
* Могильник – (Aquila heliaca)
* Беркут – (Aquila chrysaetos)
* Орлан-долгохвост – (Haliaeetus leucoryphus)
* Орлан-белохвост – (Haliaeetus albicilla)
* Бородач – (Gypaetus barbatus)
* Черный гриф – (Aegipius monachus)
* Кречет – (Falco rusticolus)
* Балобан – (Falco cherrug)
* Сапсан – (Falco peregrinus)
* Степная пустельга – (Falco naumanni)

Отряд КУРООБРАЗНЫЕ - GALLIFORMES

Сем. Фазановые – (Fasanidae)
** Алтайский улар – (Tetraogallus altaicus)
** Кеклик – (Alectoris chukar)

Отряд ЖУРАВЛЕОБРАЗНЫЕ - GRUIFORMES

Сем. Журавлиные – (Gruidae)
** Серый журавль – (Grus grus)
*Черный журавль – (Grus monacha)
* Красавка – (Anthropoides virgo)

Сем. Пастушковые – (Rallidae)
* Дрофа – (Otis tarda)
* Дрофа-красотка – (Chlamydotis undulata)

Отряд РЖАНКООБРАЗНЫЕ – CHARADRIIFORMES

Сем. Авдотковые – (Burhinidae)
* Авдотка – (Burhinus oedicnemus)

Сем. Шилоклювковые – (Recurvirosradidae)
* Ходулочник – (Himantopus himantopus)
* Шилоклювка – (Recervirostra avosetta)
* Кулик-сорока – (Haematopus ostralegus).

Сем. Бекасовые – (Scolopacidae)
**Турухтан – (Philomachus pugnax)

** Горный дупель – (Gallinago solitaria)
** Дупель – (Gallinago media)
* Большой кроншнеп – (Numenius arquata)
** Большой веретенник – (Limosa limosa)
Сем. Чайковые – (Laridae)
* Черноголовый хохотун – (Larus ichthyaetus)
** Малая чайка– (Larus minutus)
Отряд ГОЛУБЕОБРАЗНЫЕ - COLUMBIFORMES
Сем. Рябковые – (Pteroclidae)
** Саджа – (Syrrhaptes paradoxus)
Сем. Голубиные – (Columbidae)
** Вяхирь – (Columba palumbus)
Отряд СОВООБРАЗНЫЕ - STRIGIFORMES
Сем. Совиные – (Strigidae)
** Белая сова – (Nyctea scandiaca)
* Филин – (Bubo bubo)
** Воробьиный сыч – (Glaucidium passerinus).
** Ястребиная сова – (Surnia ulula)
** Бородатая неясыть – (Strix nebulosa)
Отряд СТРИЖЕОБРАЗНЫЕ APODIFORMES
Сем. Стрижевые – (Apodidae)
**Иглохвостый стриж – (Hirundapus caudacutus)
Отряд ВОРОБЬИНООБРАЗНЫЕ – PASSERIFORMES
Сем. Жаворонковые – (Alaudidae)
**Монгольский жаворонок – (Melanocorypha mongolica)
Сем. Сорокопутовые – (Laniidae)
* Серый сорокопут – (Lanius excubitor mollis)
Сем. Скворцовые – (Sturnidae)
** Розовый скворец – (Sturnus roseus).
Сем. Славковые – (Sylvidae)
**Корольковая пеночка – (Phylloscopus proregulus)
Сем. Синицевые – (Paridae)
** Белая лазоревка – (Parus cyanus)
Сем. Поползневые – (Sittidae)
**Стенолаз – (Tichodroma muraria)
Сем. Вьюрковые – (Fringillidae)
** Жемчужный вьюрок – (Leucosticte brandti)
** Большая чечевица – (Caprodacus rubicilla)
Сем. Овсянковые – (Emberizidae)
** Скальная овсянка – (Emberiza buchanani).

КЛАСС РЫБЫ – PISCES
Сем. Лососевые – (Salmonidae)
** Ленок тупорылый или ускуч (Brachymystax tumensis)
КЛАСС НАСЕКОМЫЕ – (INSECTA)
Отряд Тараканосверчки – (Notoptera)
Сем. Гриллоблаттиды (Grilloblattidae)
**Тараканосверчок Правдина – (Grilloblattella Pravdini)
Отряд Чешуекрылые – (Lepidoptera)
Сем. Голубянки – (Lycaenidae)
**Голубянка Римн – (Neolycaena rhymnus)

Сем. Парусники – (Papilionidae)
** Аполлон обыкновенный – (Parnassius Apollo)
Сем. Бархатницы – (Satyridae)
** Эребия Киндермана (Erebia Kindermanni).

Annex V to the Biosphere Reserve Periodic Review, January 2013

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